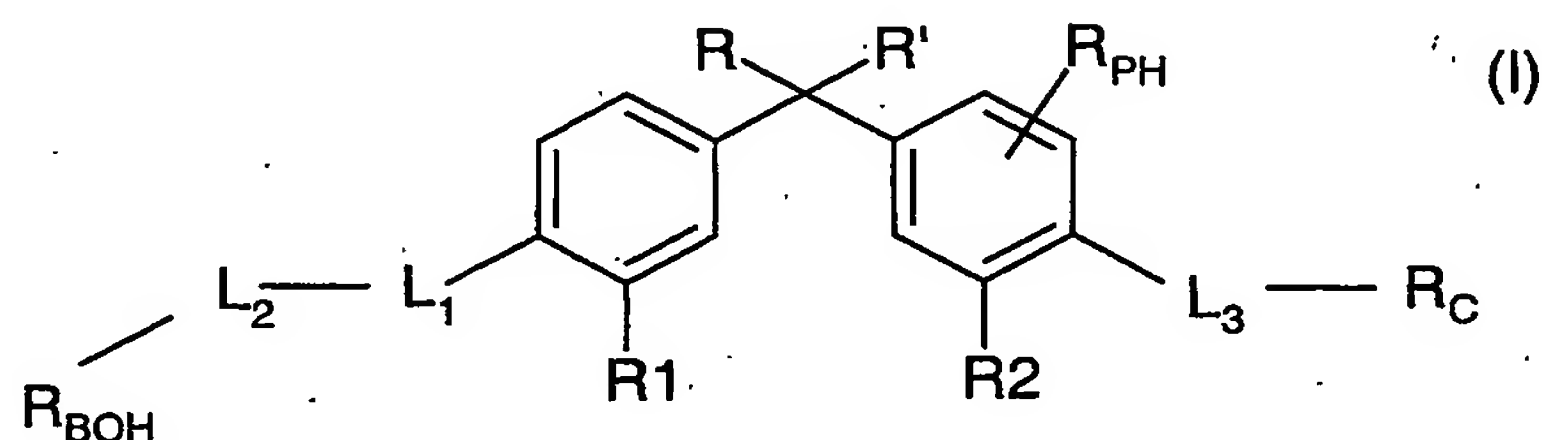


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WE CLAIM:

- 5 1. A compound represented by formula I or a pharmaceutically acceptable salt or a prodrug derivative thereof:



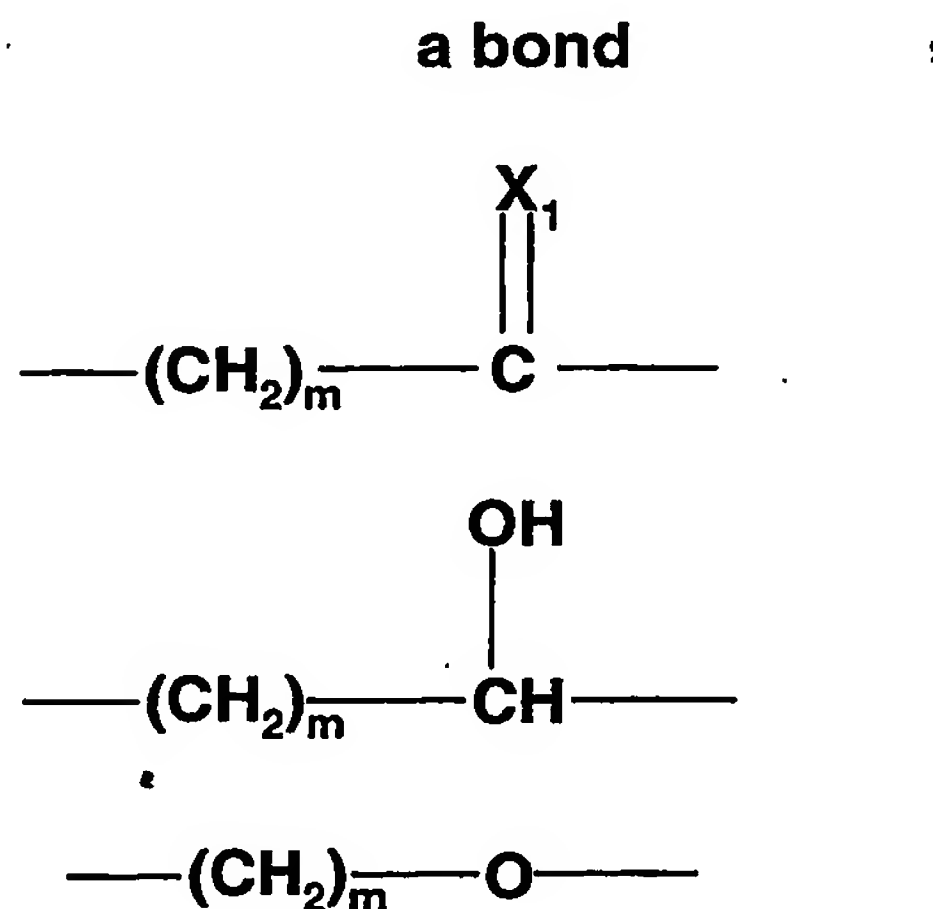
wherein;

- 10 R and R' are independently C₁-C₅ alkyl, C₁-C₅ fluoroalkyl, or together R and R' form a substituted or unsubstituted, saturated or unsaturated carbocyclic ring having from 3 to 8 carbon atoms;

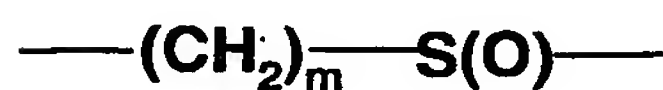
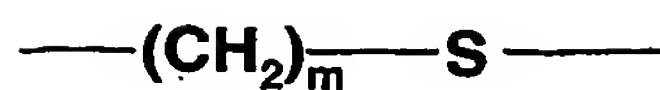
R_{PH} is hydrogen or methyl;

- 15 R₁ and R₂ are independently selected from the group consisting of hydrogen, halo, C₁-C₅ alkyl, C₁-C₅ fluoroalkyl, -O-C₁-C₅ alkyl, -S-C₁-C₅ alkyl, -O-C₁-C₅ fluoroalkyl, -CN, -NO₂, acetyl, -S-C₁-C₅ fluoroalkyl, C₂-C₅ alkenyl, C₃-C₅ cycloalkyl, and C₃-C₅ cycloalkenyl;

L₁ and L₂ and L₃ are divalent linking groups independently selected from the group consisting of

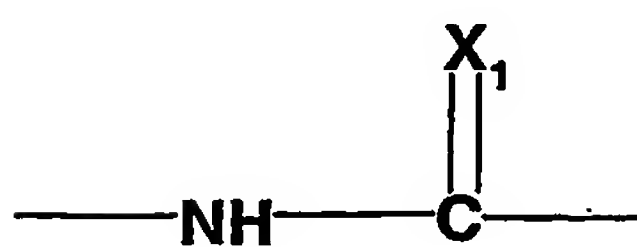
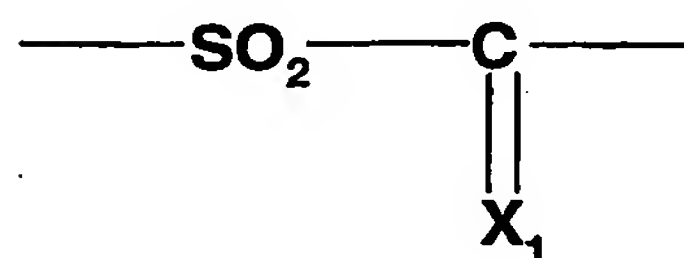
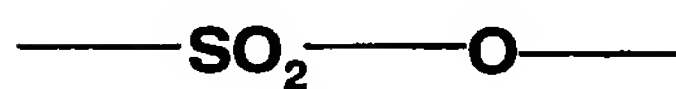
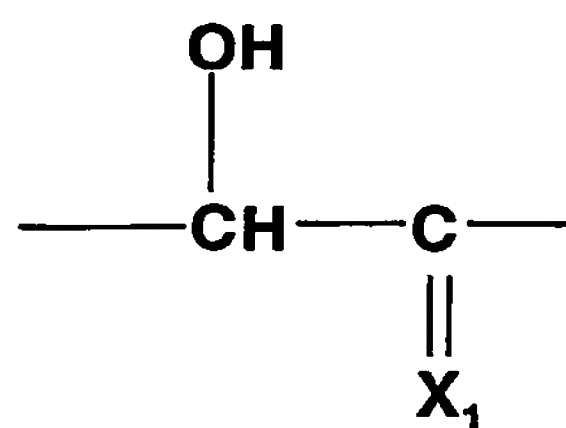
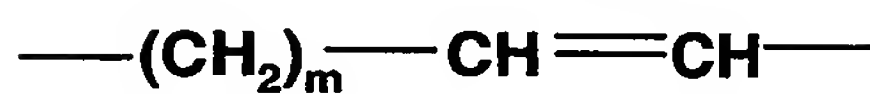


-111-

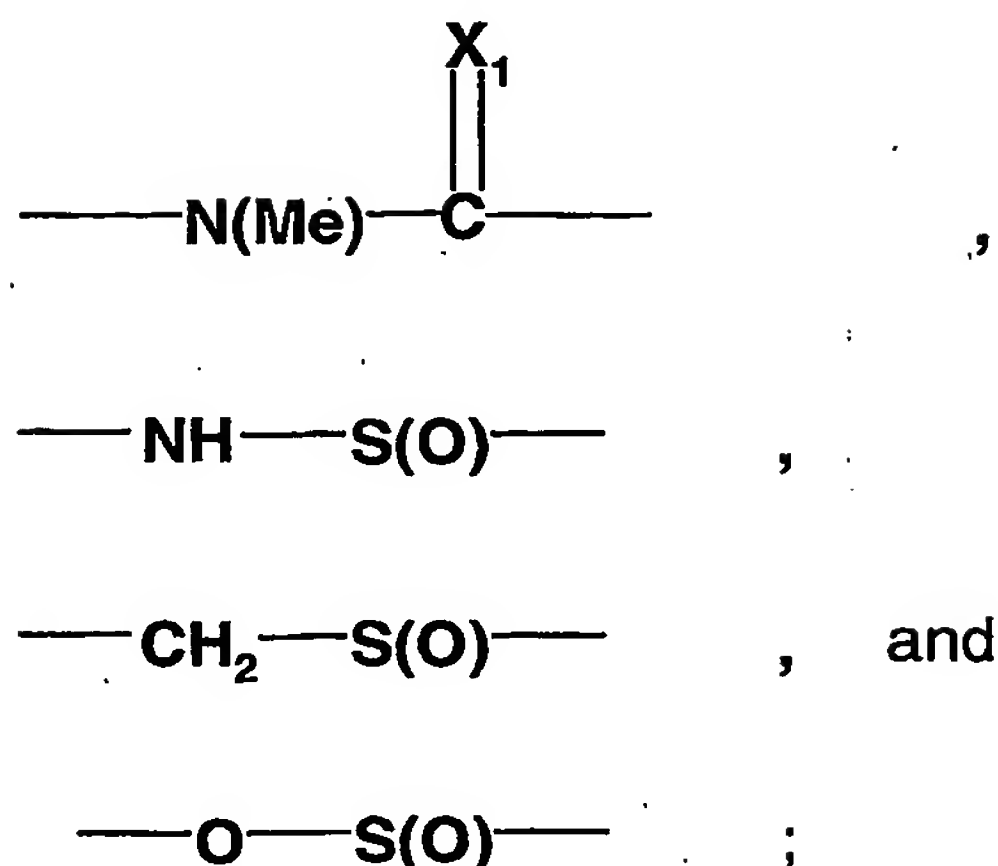


$$\begin{array}{c} | \\ \text{R40} \end{array}$$

$$\begin{array}{c} \text{R40} \\ | \end{array}$$


$$\begin{array}{c} | \\ \text{R40} \end{array}$$


-112-



where m is 0, 1 or 2, X₁ is oxygen or sulfur, and each R₄₀ is independently hydrogen,
 5 C₁-C₅ alkyl, or C₁-C₅ fluoroalkyl;

R_{BOH} is

- 3-methyl-3-hydroxypentyl,
- 3-methyl-3-hydroxypentenyl,
- 3-methyl-3-hydroxypentynyl,
- 10 3-ethyl-3-hydroxypentyl,
- 3-ethyl-3-hydroxypentenyl,
- 3-ethyl-3-hydroxypentynyl,
- 3-ethyl-3-hydroxy-4-methylpentyl,
- 3-ethyl-3-hydroxy-4-methylpentenyl,
- 15 3-ethyl-3-hydroxy-4-methylpentynyl,
- 3-propyl-3-hydroxypentyl,
- 3-propyl-3-hydroxypentenyl,
- 3-propyl-3-hydroxypentynyl,
- 1-hydroxy-2-methyl-1-(methylethyl)propyl,
- 20 1-hydroxycyclopentenyl,
- 1-hydroxycyclohexenyl,
- 1-hydroxycycloheptenyl,
- 1-hydroxycyclooctenyl,
- 1-hydroxycyclopropyl,
- 25 1-hydroxycyclobutyl,
- 1-hydroxycyclopentyl,

-113-

1-hydroxycyclohexyl,
1-hydroxycycloheptyl, or
1-hydroxycyclooctyl;

provided, however, that when

5

R_{BOH} is

10

3-methyl-3-hydroxypentyl,
3-methyl-3-hydroxypentenyl,
3-methyl-3-hydroxypentynyl,
3-ethyl-3-hydroxypentyl,
3-ethyl-3-hydroxypentenyl,
3-ethyl-3-hydroxypentynyl,
3-ethyl-3-hydroxy-4-methylpentyl,
3-ethyl-3-hydroxy-4-methylpentenyl,
3-ethyl-3-hydroxy-4-methylpentynyl,
3-propyl-3-hydroxypentyl,
3-propyl-3-hydroxypentenyl,
3-propyl-3-hydroxypentynyl, or
1-hydroxy-2-methyl-1-(methylethyl)propyl;

15

then L₁ and L₂ combine as a bond; and

20

R_C is

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-CO₂H,
-CO₂Me,
-CO₂Et,
-C(O)CH₂S(O)Me,
-C(O)CH₂S(O)Et,
-C(O)CH₂S(O)₂Me,
-C(O)CH₂S(O)₂Et,
-C(O)CH₂CH₂S(O)Me,
-C(O)CH₂CH₂S(O)Et,
-C(O)CH₂CH₂S(O)₂Me,
-C(O)CH₂CH₂S(O)₂Et,
-C(O)CHMeCH₂CO₂H

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- C(O)C(O)OH,
 - C(O)C(O)NH₂,
 - C(O)C(O)NHMe,
 - C(O)C(O)NMe₂,
 - C(O)NH₂, C(O)NMe₂,
 - C(O)NHS(O)Me,
 - C(O)NHSO₂Me,
 - C(O)-NH-5-tetrazolyl,
 - C(O)NMe-5-tetrazolyl,
 - C(O)NHS(O)Me,
 - C(O)NHS(O)Et,
 - C(O)NHSO₂Me,
 - C(O)NHSO₂Et,
 - C(O)NHS(O)iPr,
 - C(O)NHSO₂iPr,
 - C(O)NHS(O)nPr,
 - C(O)NHSO₂nPr,
 - C(O)NHCH₂S(O)Me,
 - C(O)NHCH₂S(O)Et,
 - C(O)NHCH₂SO₂Me,
 - C(O)NHCH₂SO₂Et,
 - C(O)NHCH₂CH₂S(O)Me,
 - C(O)NHCH₂CH₂S(O)Et,
 - C(O)NHCH₂CH₂SO₂Me,
 - C(O)NHCH₂CH₂SO₂Et,
 - C(O)NH₂,
 - C(O)NMe₂,
 - C(O)NH-CH₂-C(O)OH,
 - C(O)NH-CH(Me)-C(O)OH,
 - C(O)NH-CH(F)-C(O)OH,
 - C(O)NH-CH(CF₃)-C(O)OH,
 - C(O)NH-CH(OH)-C(O)OH,

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- C(O)NH-CH(cyclopropyl)-C(O)OH,
 - C(O)NH-C(Me)₂-C(O)OH,
 - C(O)NH-C(Me)₂-C(O)OH,
 - C(O)NH-CF(Me)-C(O)OH,
 - C(O)NH-C(Me)(CF₃)-C(O)OH,
 - C(O)NH-C(Me)(OH)-C(O)OH,
 - C(O)NH-C(Me)(cyclopropyl)-C(O)OH,
 - C(O)NMe-CH₂-C(O)OH,
 - C(O)NMe-CH(Me)-C(O)OH,
 - C(O)NMe-CH(F)-C(O)OH,
 - C(O)NMe-CH(CF₃)-C(O)OH,
 - C(O)NMe-CH(OH)-C(O)OH,
 - C(O)NMe-CH(cyclopropyl)-C(O)OH,
 - C(O)NMe-C(Me)₂-C(O)OH,
 - C(O)NMe-CF(Me)-C(O)OH,
 - C(O)NMe-C(Me)(CF₃)-C(O)OH,
 - C(O)NMe-C(Me)(OH)-C(O)OH,
 - C(O)NMe-C(Me)(cyclopropyl)-C(O)OH,
 - CH₂-CO₂H,
 - CH₂-5-tetrazolyl,
 - CH₂CO₂Me,
 - CH₂CO₂Et,
 - CH₂NHS(O)Me,
 - CH₂NHS(O)Et,
 - CH₂NHSO₂Me,
 - CH₂NHSO₂Et,
 - CH₂NHS(O)iPr,
 - CH₂NHSO₂iPr,
 - CH₂NHS(O)nPr,
 - CH₂NHSO₂nPr,
 - CH₂NHCH₂CH₂SO₂CH₃,
 - CH₂NH(CH₂CO₂H),

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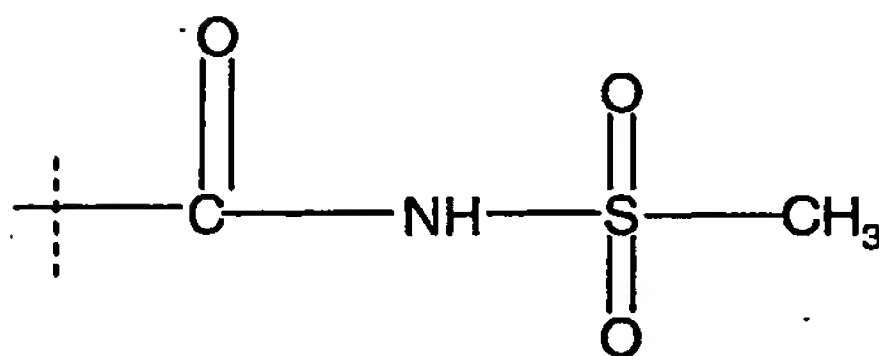
-CH₂N(C(O)Me)(CH₂CO₂H),
-CH₂-N-pyrrolidin-2-one,
-CH₂-(1-methylpyrrolidin-2-one-3-yl),
-CH₂S(O)Me,
-CH₂S(O)Et,
-CH₂S(O)₂Me,
-CH₂S(O)₂Et,
-CH₂S(O)iPr,
-CH₂S(O)₂iPr,
-CH₂S(O)nPr,
-CH₂S(O)₂nPr,
-CH₂CO₂H, CH₂C(O)NH₂,
-CH₂C(O)NMe₂,
-CH₂C(O)NHMe,
-CH₂C(O)-N-pyrrolidine,
-CH₂S(O)₂Me,
-CH₂S(O)Me,
-CH(OH)CO₂H,
-CH(OH)C(O)NH₂,
-CH(OH)C(O)NHMe,
-CH(OH)C(O)NMe₂,
-CH(OH)C(O)NEt₂,
-CH₂CH₂CO₂H,
-CH₂CH₂CO₂Me,
-CH₂CH₂CO₂Et,
-CH₂CH₂C(O)NH₂,
-CH₂CH₂C(O)NHMe,
-CH₂CH₂C(O)NMe₂,
-CH₂CH₂-5-tetrazolyl,
-CH₂CH₂S(O)₂Me,
-CH₂CH₂S(O)Me,
-CH₂CH₂S(O)₂Et,

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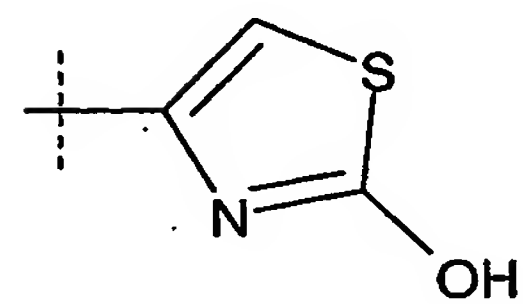
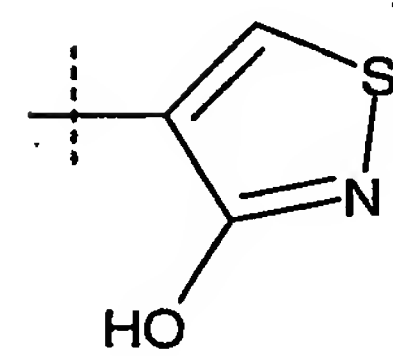
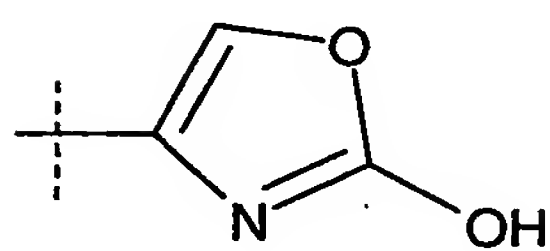
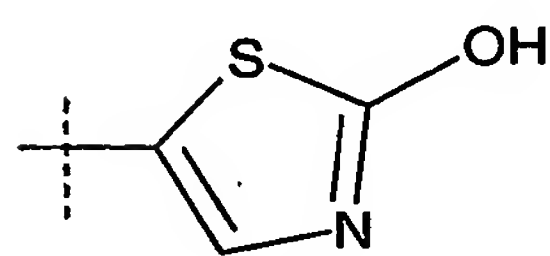
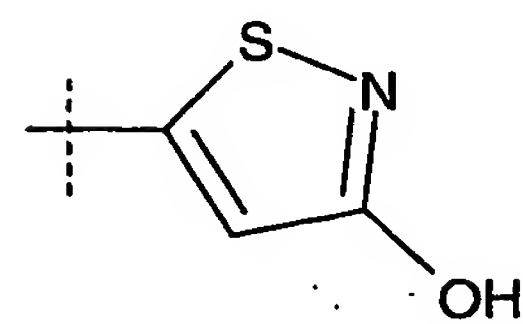
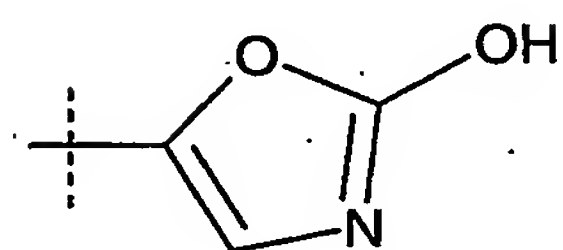
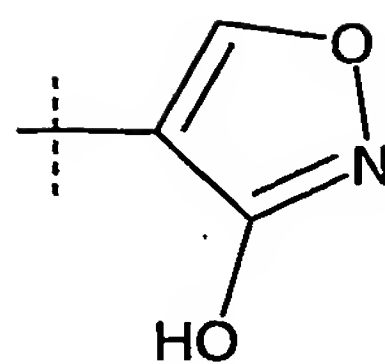
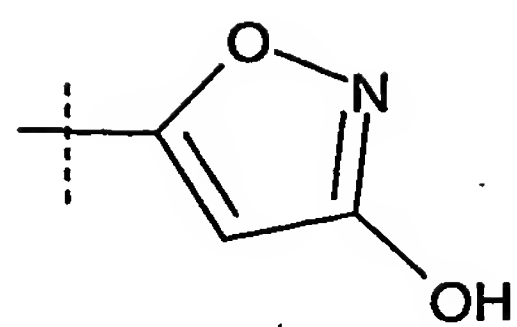
-CH₂CH₂S(O) Et,
-CH₂CH₂S(O)iPr,
-CH₂CH₂S(O)₂iPr,
-CH₂CH₂S(O)nPr,
-CH₂CH₂S(O)₂nPr,
-CH₂CH₂S(O)NH₂,
-CH₂CH₂S(O)NHMe,
-CH₂CH₂S(O)NMe₂,
-CH₂CH₂S(O)₂NH₂,
-CH₂CH₂S(O)₂NHMe,
-CH₂CH₂S(O)₂NMe₂,
-CH₂CH₂CH₂S(O)Me,
-CH₂CH₂CH₂S(O)Et,
-CH₂CH₂CH₂S(O)₂Me,
-CH₂CH₂CH₂S(O)₂Et,
-CH(Me)CH₂C(O)OH,
-C(Me)₂CH₂C(O)OH,

-SO₃H,

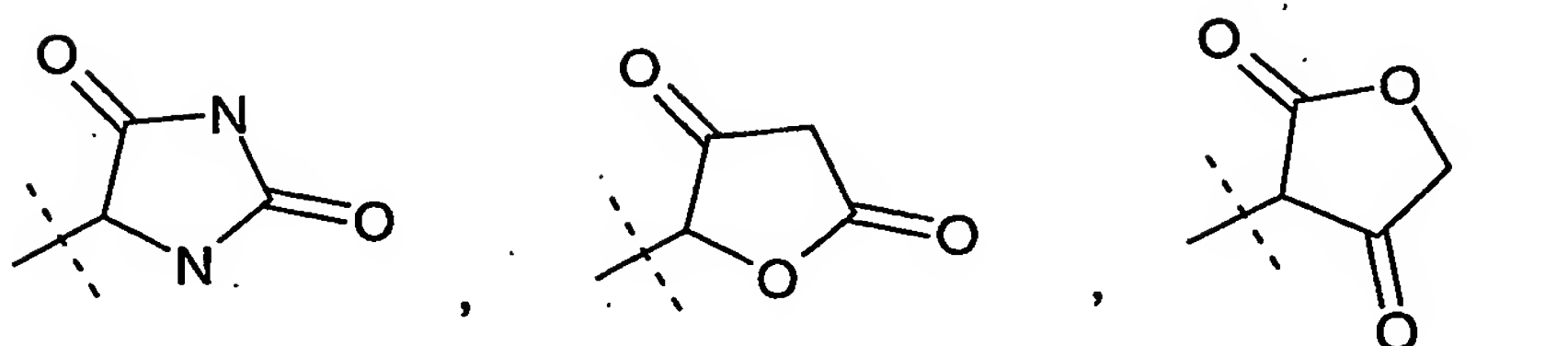
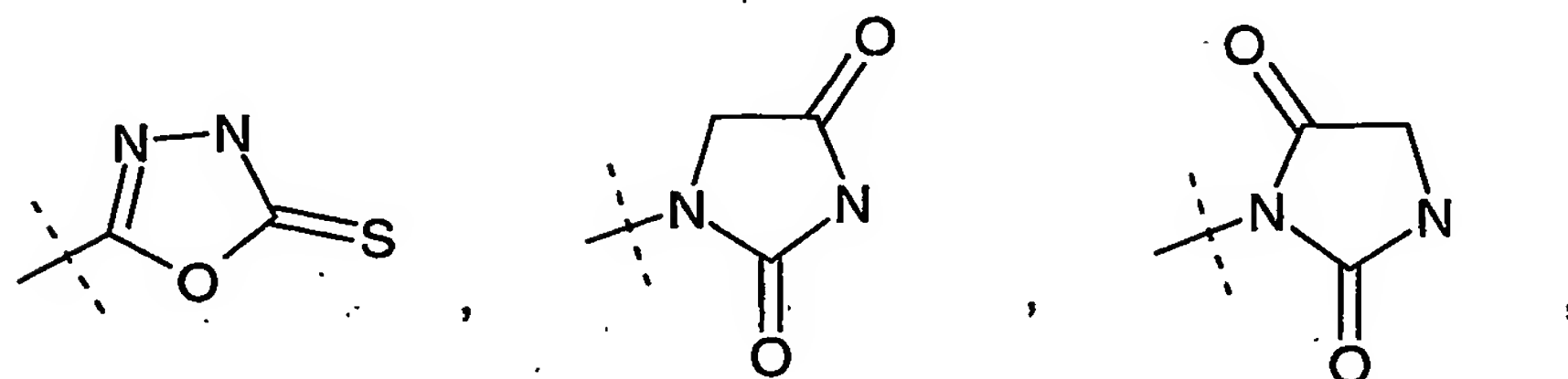
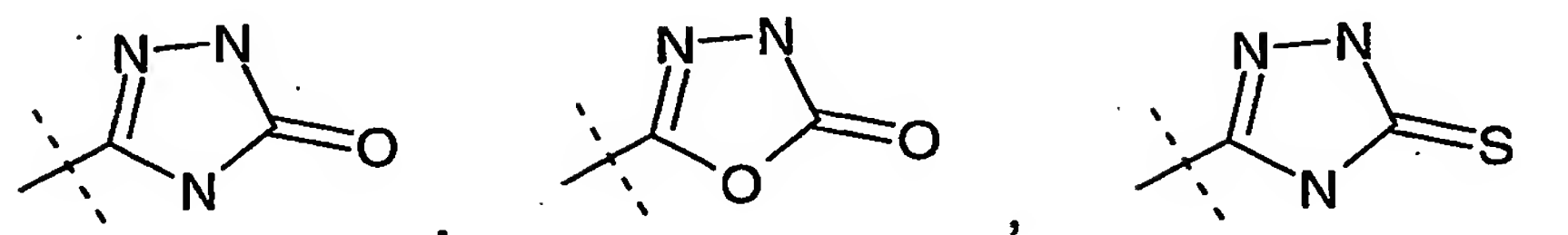
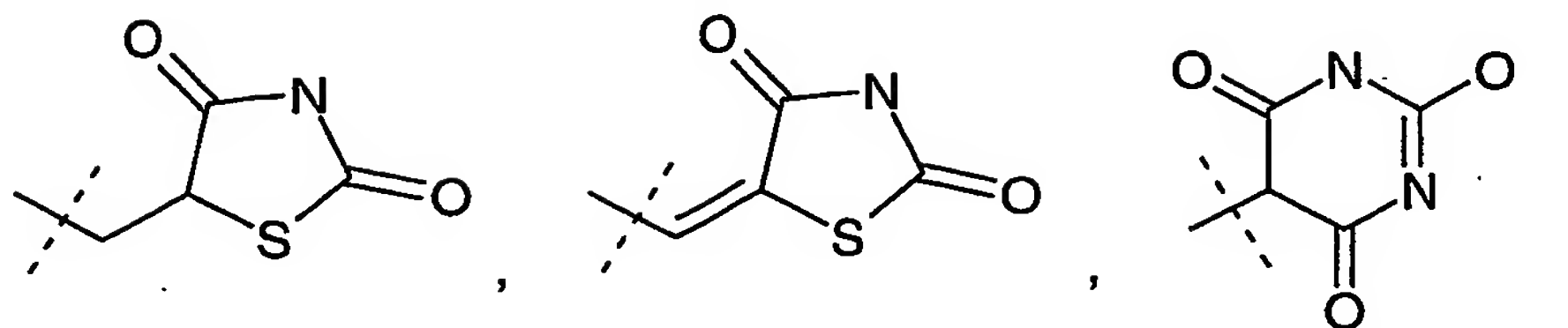
-5-tetrazolyl,



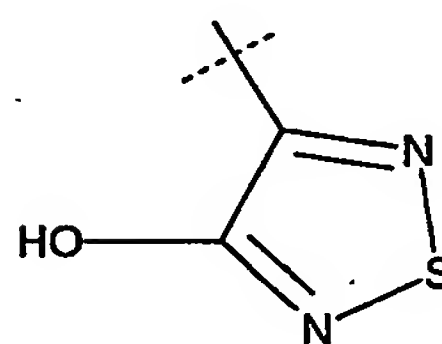
-118-



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or



-1,3,4-oxadiazolin-2-one-5-yl,
-imidazolidine-2,4-dione-5-yl,
-1,3-thiazolidine-2,4-dione-5-methylidene,
-isoxazol-3-ol-yl, or
-1,3,4-oxadiazolin-2-thione-5-yl.

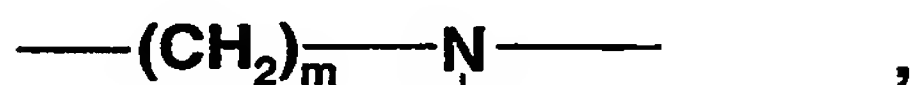
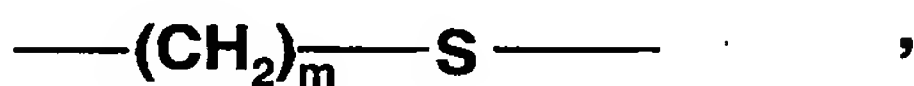
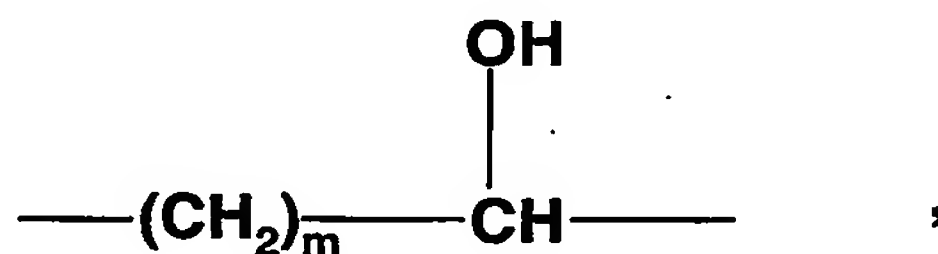
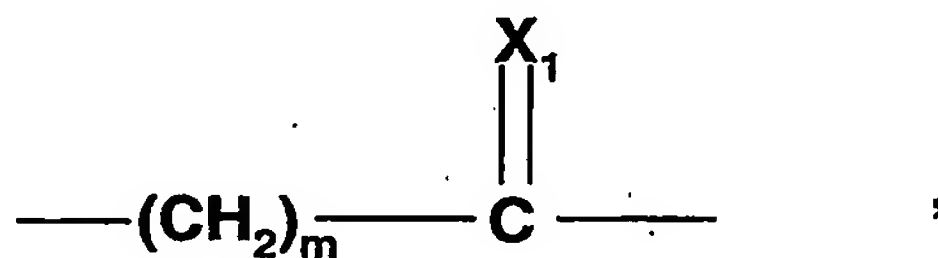
-120-

2. A compound according to Claim 1 or a pharmaceutically acceptable salt or ester prodrug derivative thereof wherein

R_{PH} is hydrogen;

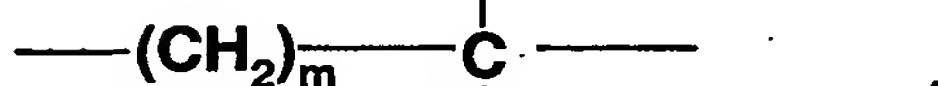
L_3 are divalent linking groups independently selected from the group consisting of

a bond



R40

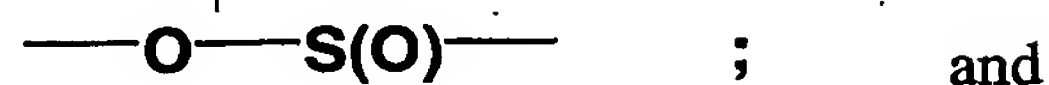
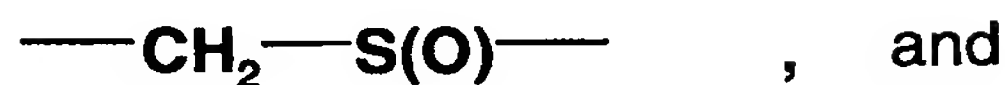
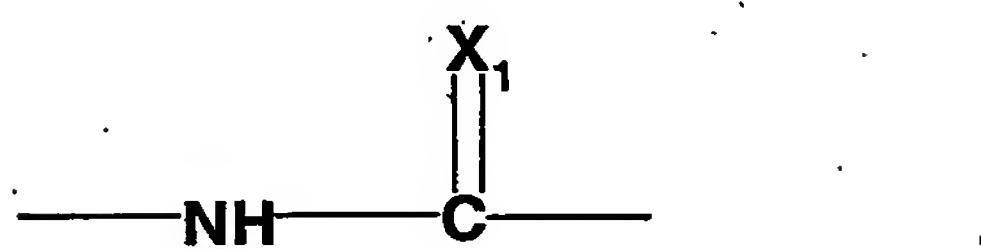
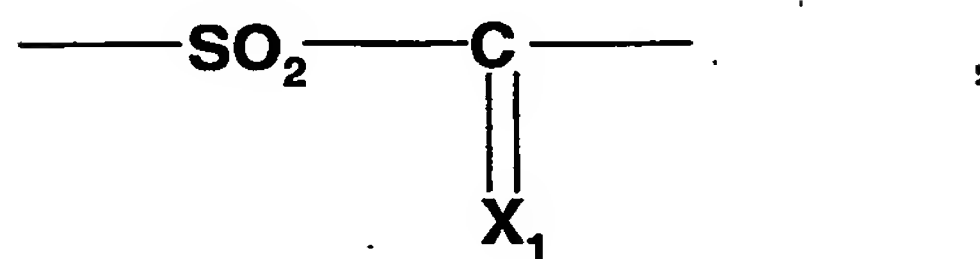
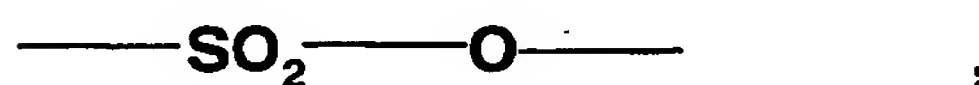
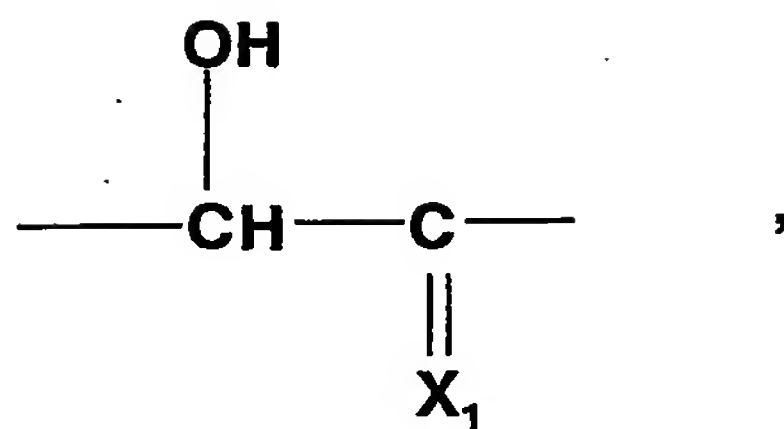
R40



R40



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R_C is-CO₂H,-CO₂Me,-CO₂Et,

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-C(O)CH₂S(O)Me,-C(O)CH₂S(O)Et,-C(O)CH₂S(O)₂Me,-C(O)CH₂S(O)₂Et,-C(O)CH₂CH₂S(O)Me,

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-C(O)CH₂CH₂S(O)Et,

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- C(O)CH₂CH₂S(O)₂Me,
 - C(O)CH₂CH₂S(O)₂Et,
 - C(O)CHMeCH₂CO₂H
 - C(O)C(O)OH,
 - C(O)C(O)NH₂,
 - C(O)C(O)NHMe,
 - C(O)C(O)NMe₂,
 - C(O)NH₂, C(O)NMe₂,
 - C(O)NHS(O)Me,
 - C(O)NHSO₂Me,
 - C(O)-NH-5-tetrazolyl,
 - C(O)NMe-5-tetrazolyl,
 - C(O)NHS(O)Me,
 - C(O)NHS(O)Et,
 - C(O)NHSO₂Me,
 - C(O)NHSO₂Et,
 - C(O)NHS(O)iPr,
 - C(O)NHSO₂iPr,
 - C(O)NHS(O)nPr,
 - C(O)NHSO₂nPr,
 - C(O)NHCH₂S(O)Me,
 - C(O)NHCH₂S(O)Et,
 - C(O)NHCH₂SO₂Me,
 - C(O)NHCH₂SO₂Et,
 - C(O)NHCH₂CH₂S(O)Me,
 - C(O)NHCH₂CH₂S(O)Et,
 - C(O)NHCH₂CH₂SO₂Me,
 - C(O)NHCH₂CH₂SO₂Et,
 - C(O)NH₂,
 - C(O)NMe₂,
 - C(O)NH-CH₂-C(O)OH,
 - C(O)NH-CH(Me)-C(O)OH,

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- C(O)NH-CH(F)-C(O)OH,
 - C(O)NH-CH(CF₃)-C(O)OH,
 - C(O)NH-CH(OH)-C(O)OH,
 - C(O)NH-CH(cyclopropyl)-C(O)OH,
 - C(O)NH-C(Me)₂-C(O)OH,
 - C(O)NH-C(Me)₂-C(O)OH,
 - C(O)NH-CF(Me)-C(O)OH,
 - C(O)NH-C(Me)(CF₃)-C(O)OH,
 - C(O)NH-C(Me)(OH)-C(O)OH,
 - C(O)NH-C(Me)(cyclopropyl)-C(O)OH,
 - C(O)NMe-CH₂-C(O)OH,
 - C(O)NMe-CH(Me)-C(O)OH,
 - C(O)NMe-CH(F)-C(O)OH,
 - C(O)NMe-CH(CF₃)-C(O)OH,
 - C(O)NMe-CH(OH)-C(O)OH,
 - C(O)NMe-CH(cyclopropyl)-C(O)OH,
 - C(O)NMe-C(Me)₂-C(O)OH,
 - C(O)NMe-CF(Me)-C(O)OH,
 - C(O)NMe-C(Me)(CF₃)-C(O)OH,
 - C(O)NMe-C(Me)(OH)-C(O)OH,
 - C(O)NMe-C(Me)(cyclopropyl)-C(O)OH,

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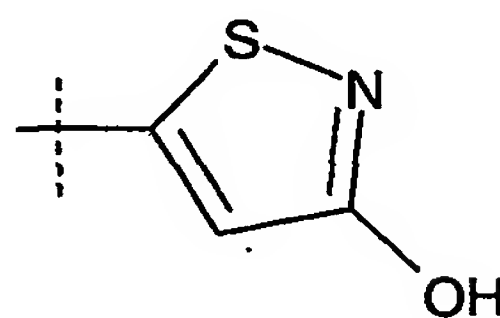
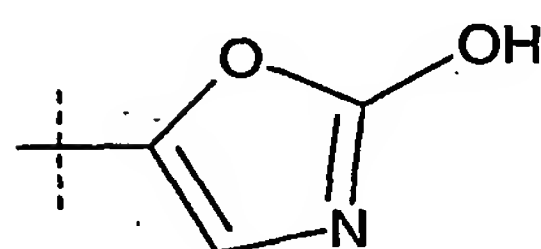
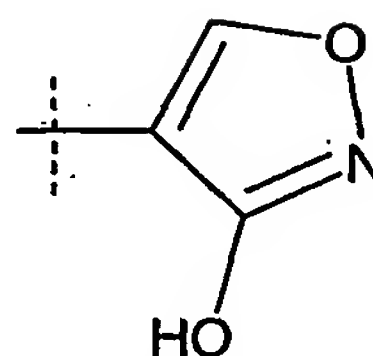
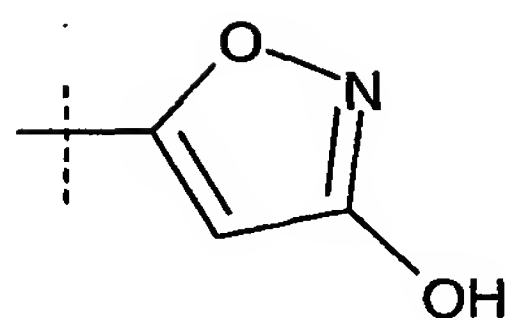
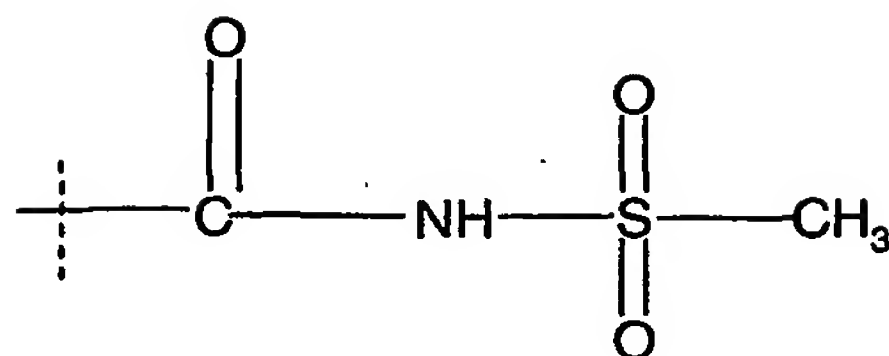
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- CH₂-CO₂H,
 - CH₂-5-tetrazolyl,
 - CH₂ CO₂Me,
 - CH₂CO₂Et,
 - CH₂NHS(O)Me,
 - CH₂NHS(O)Et,
 - CH₂NHSO₂Me,
 - CH₂NHSO₂Et,
 - CH₂NHS(O)iPr,
 - CH₂NHSO₂iPr,
 - CH₂NHS(O)nPr,
 - CH₂NHSO₂nPr,
 - CH₂NHCH₂CH₂SO₂CH₃,
 - CH₂NH(CH₂CO₂H),
 - CH₂N(C(O)Me)(CH₂CO₂H),
 - CH₂-N-pyrrolidin-2-one,
 - CH₂-(1-methylpyrrolidin-2-one-3-yl),
 - CH₂S(O)Me,
 - CH₂S(O)Et,
 - CH₂S(O)₂Me,
 - CH₂S(O)₂Et,
 - CH₂S(O)iPr,
 - CH₂S(O)₂iPr,
 - CH₂S(O)nPr,
 - CH₂S(O)₂nPr,
 - CH₂CO₂H, CH₂C(O)NH₂,
 - CH₂C(O)NMe₂,
 - CH₂C(O)NHMe,
 - CH₂C(O)-N-pyrrolidine,
 - CH₂S(O)₂Me,
 - CH₂S(O)Me,
 - CH(OH) CO₂H,

-125-

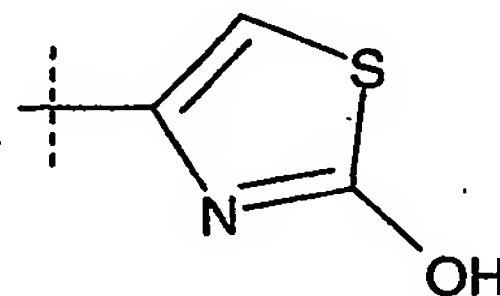
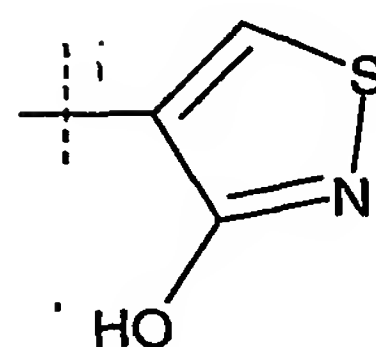
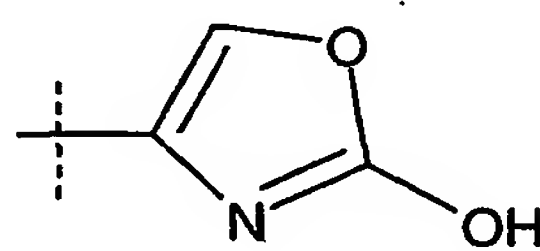
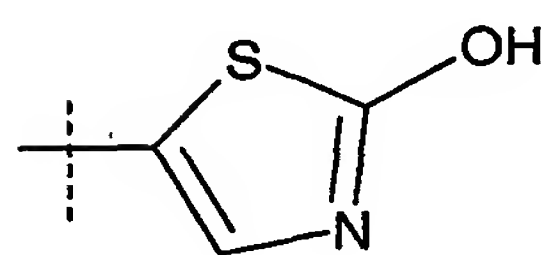
- 5
- 10
- 15
- 20
- 25
- 30
- CH(OH)C(O)NH₂,
 - CH(OH)C(O)NHMe,
 - CH(OH)C(O)NMe₂,
 - CH(OH)C(O)NEt₂,
 - CH₂CH₂CO₂H,
 - CH₂CH₂CO₂Me,
 - CH₂CH₂CO₂Et,
 - CH₂CH₂C(O)NH₂,
 - CH₂CH₂C(O)NHMe,
 - CH₂CH₂C(O)NMe₂,
 - CH₂CH₂-5-tetrazolyl,
 - CH₂CH₂S(O)₂Me,
 - CH₂CH₂S(O)Me,
 - CH₂CH₂S(O)₂Et,
 - CH₂CH₂S(O) Et,
 - CH₂CH₂S(O)iPr,
 - CH₂CH₂S(O)₂iPr,
 - CH₂CH₂S(O)nPr,
 - CH₂CH₂S(O)₂nPr,
 - CH₂CH₂S(O)NH₂,
 - CH₂CH₂S(O)NHMe,
 - CH₂CH₂S(O)NMe₂,
 - CH₂CH₂S(O)₂NH₂,
 - CH₂CH₂S(O)₂NHMe,
 - CH₂CH₂S(O)₂NMe₂,
 - CH₂CH₂CH₂S(O)Me,
 - CH₂CH₂CH₂S(O)Et,
 - CH₂CH₂CH₂S(O)₂Me,
 - CH₂CH₂CH₂S(O)₂Et,
 - SO₃H,

-126-

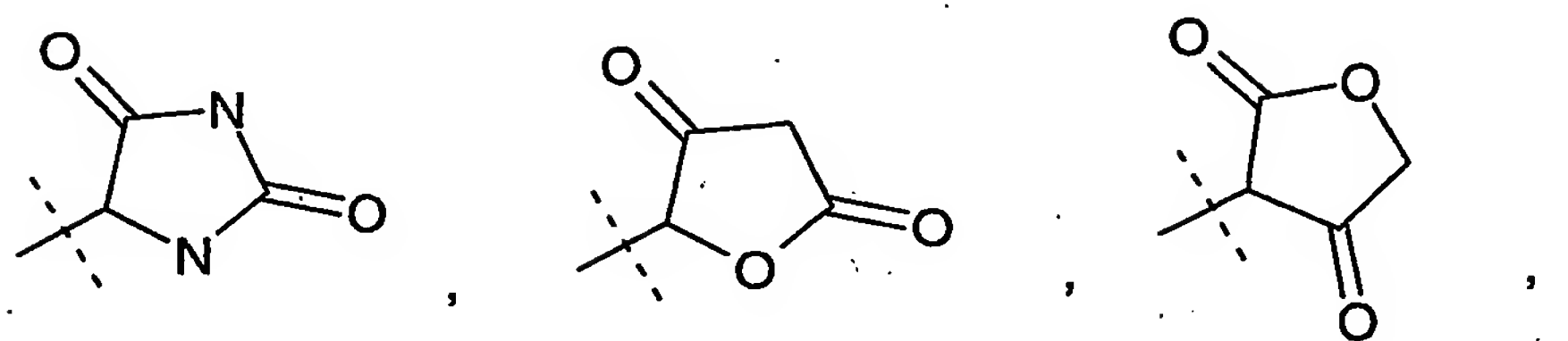
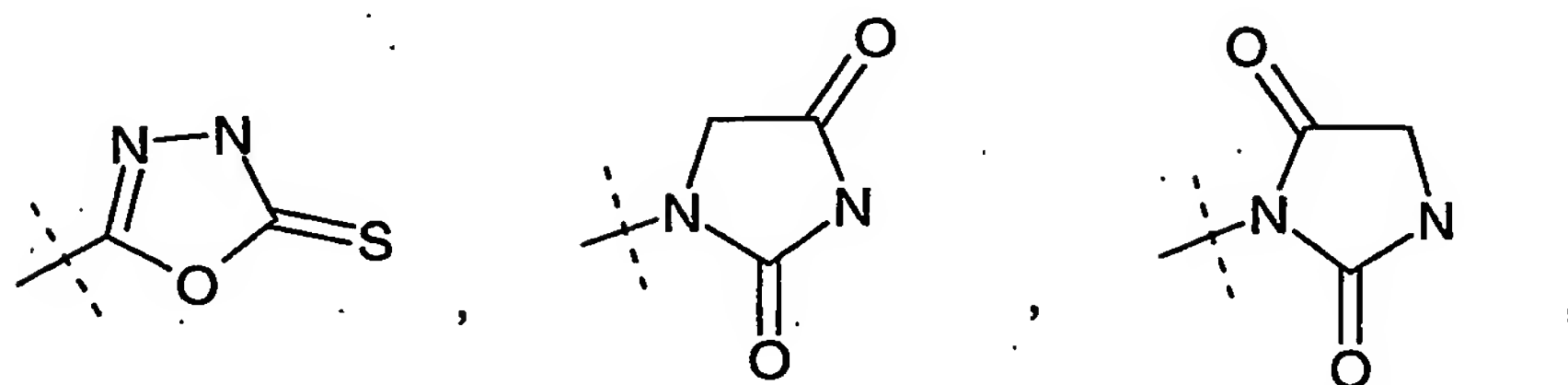
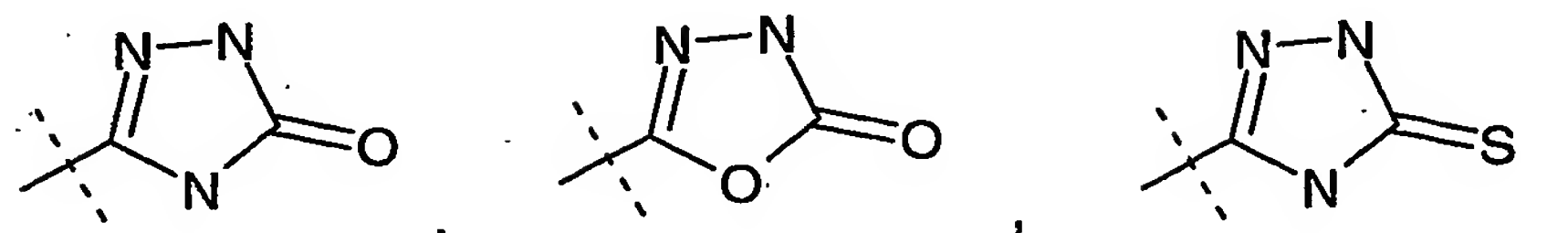
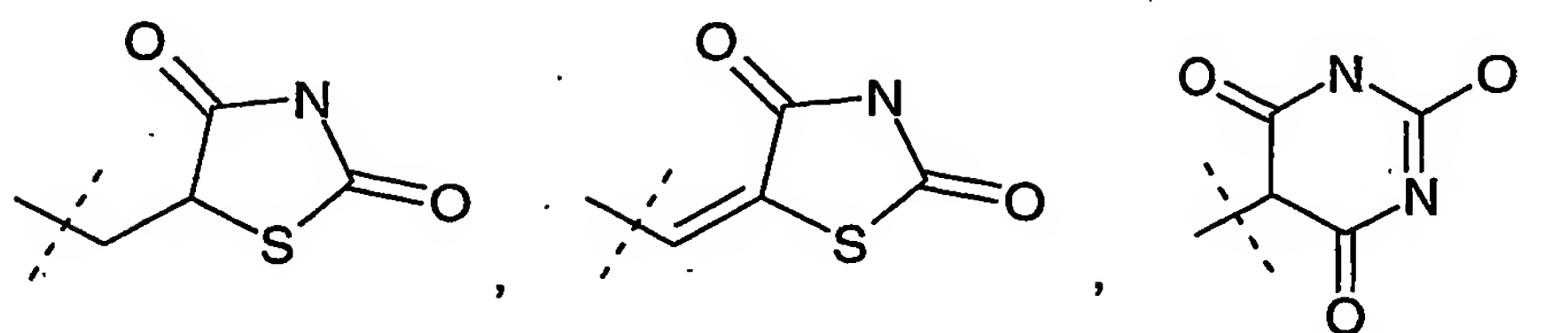
-5-tetrazolyl,



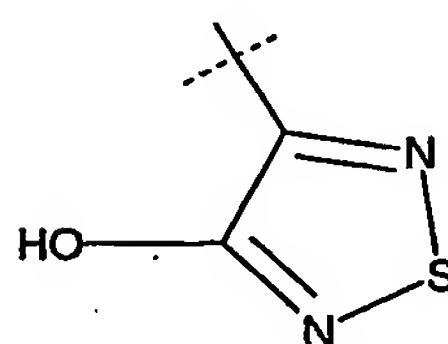
5



-127-



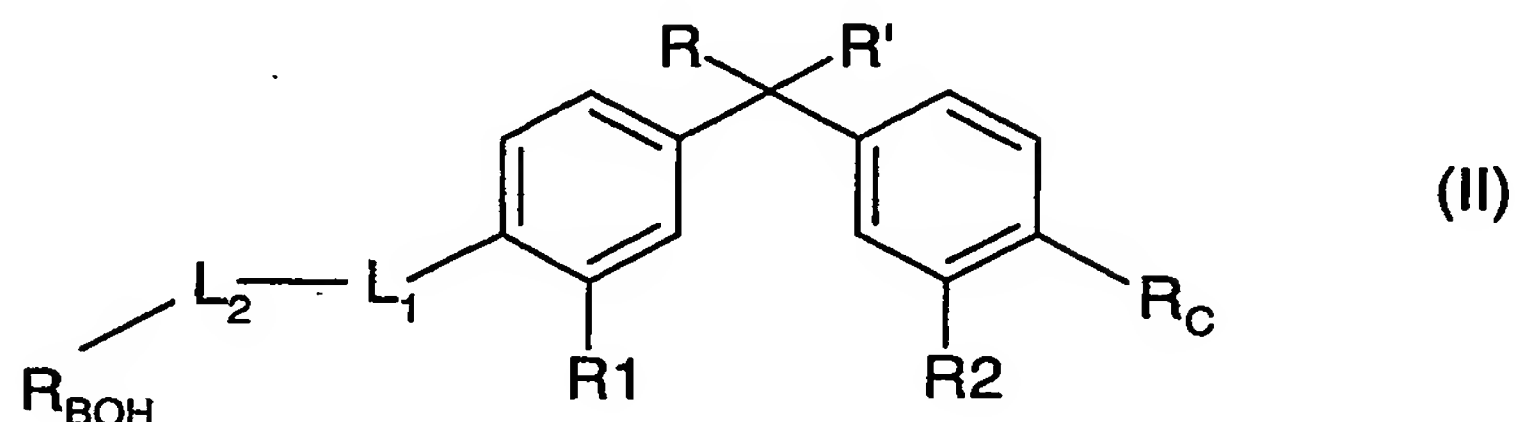
or



-1,3,4-oxadiazolin-2-one-5-yl,
-imidazolidine-2,4-dione-5-yl,
-1,3-thiazolidine-2,4-dione-5-methylidene,
-isoxazol-3-ol-yl, or
-1,3,4-oxadiazolin-2-thione-5-yl.

-128-

3. A compound represented by formula (II) or a pharmaceutically acceptable salt or an ester prodrug derivative thereof:



wherein;

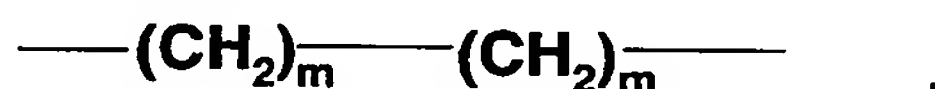
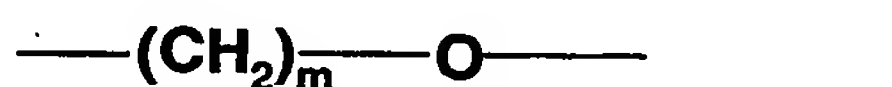
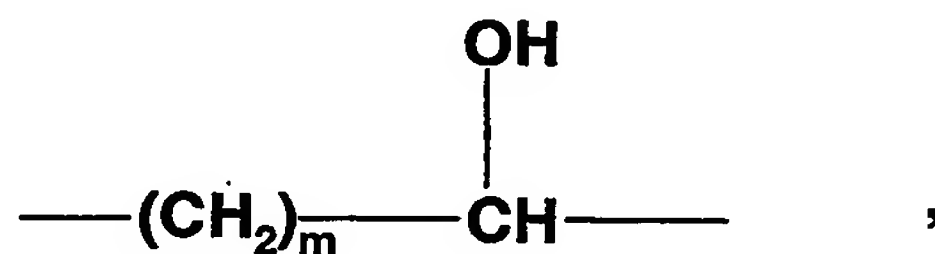
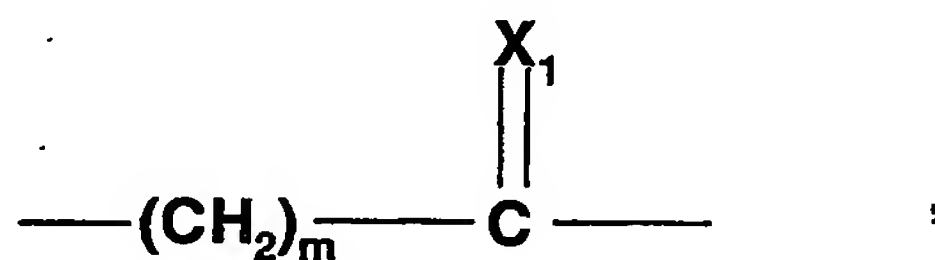
5

R and R' are independently methyl or ethyl;

R1 and R2 are independently hydrogen, halo, -CF₃, methyl, ethyl, or cyclopropyl;

L₁ and L₂ are independently divalent linking groups independently selected from

a bond



, or



where m is 0 or 1;

R_{BOH} is selected from

15

1-hydroxycyclopentenyl,

1-hydroxycyclohexenyl,

1-hydroxycyclopentyl, or

1-hydroxycyclohexyl, and

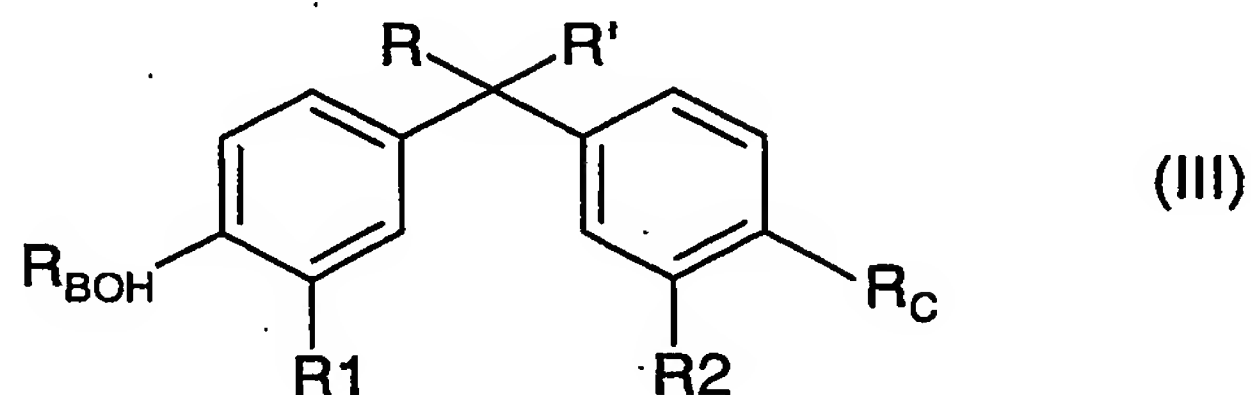
R_C is a group selected from

-129-

- 5
- 10
- 15
- 20
- 25
- 30
- CO₂H,
 - CO₂Me,
 - CO₂Et,
 - C(O)NH₂,
 - C(O)NMe₂,
 - C(O)NH-CH₂-C(O)OH,
 - C(O)NH-CH(Me)-C(O)OH,
 - C(O)NH-CH(F)-C(O)OH,
 - C(O)NH-CH(CF₃)-C(O)OH,
 - C(O)NH-CH(OH)-C(O)OH,
 - C(O)NH-CH(cyclopropyl)-C(O)OH,
 - C(O)NH-C(Me)₂-C(O)OH,
 - C(O)NH-C(Me)₂-C(O)OH,
 - C(O)NH-CF(Me)-C(O)OH,
 - C(O)NH-C(Me)(CF₃)-C(O)OH,
 - C(O)NH-C(Me)(OH)-C(O)OH,
 - C(O)NH-C(Me)(cyclopropyl)-C(O)OH,
 - C(O)NMe-CH₂-C(O)OH,
 - C(O)NMe-CH(Me)-C(O)OH,
 - C(O)NMe-CH(F)-C(O)OH,
 - C(O)NMe-CH(CF₃)-C(O)OH,
 - C(O)NMe-CH(OH)-C(O)OH,
 - C(O)NMe-CH(cyclopropyl)-C(O)OH,
 - C(O)NMe-C(Me)₂-C(O)OH,
 - C(O)NMe-CF(Me)-C(O)OH,
 - C(O)NMe-C(Me)(CF₃)-C(O)OH,
 - C(O)NMe-C(Me)(OH)-C(O)OH,
 - C(O)NMe-5-tetrazolyl,
 - C(O)NMe-C(Me)(cyclopropyl)-C(O)OH, or
 - C(O)-NH-5-tetrazolyl.

-130-

4. A compound represented by formula (III) or a pharmaceutically acceptable salt or an ester prodrug derivative thereof:



wherein;

5 R and R' are independently methyl or ethyl;

R1 and R2 are independently hydrogen, halo, -CF₃, methyl, ethyl, or cyclopropyl;

R_{BOH} is selected from

3-methyl-3-hydroxypentyl,
 3-methyl-3-hydroxypentenyl,
 10 3-methyl-3-hydroxypentynyl,
 3-ethyl-3-hydroxypentyl,
 3-ethyl-3-hydroxypentenyl,
 3-ethyl-3-hydroxypentynyl,
 3-propyl-3-hydroxypentyl,
 15 3-propyl-3-hydroxypentenyl,
 3-propyl-3-hydroxypentynyl,
 3-ethyl-3-hydroxy-4-methylpentyl,
 3-ethyl-3-hydroxy-4-methylpentenyl,
 3-ethyl-3-hydroxy-4-methylpentynyl, or
 20 1-hydroxy-2-methyl-1-(methylethyl)propyl;
 and

R_C is a group selected from

-CO₂H,
 -CO₂Me,
 25 -CO₂Et,
 -C(O)NH₂,
 -C(O)NMe₂,
 -C(O)NH-CH₂-C(O)OH,
 -C(O)NH-CH(Me)-C(O)OH,

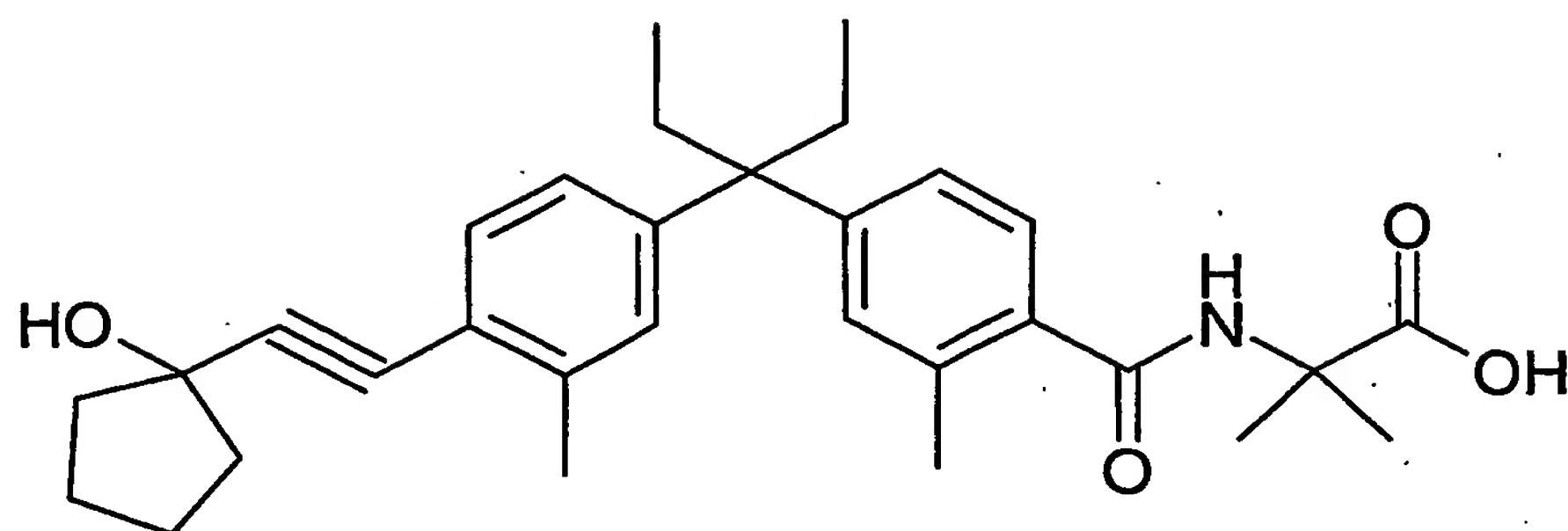
-131-

-C(O)NH-CH(F)-C(O)OH,
-C(O)NH-CH(CF₃)-C(O)OH,
-C(O)NH-CH(OH)-C(O)OH,
-C(O)NH-CH(cyclopropyl)-C(O)OH,
5 -C(O)NH-C(Me)₂-C(O)OH,
-C(O)NH-C(Me)₂-C(O)OH,
-C(O)NH-CF(Me)-C(O)OH,
-C(O)NH-C(Me)(CF₃)-C(O)OH,
-C(O)NH-C(Me)(OH)-C(O)OH,
10 -C(O)NH-C(Me)(cyclopropyl)-C(O)OH,
-C(O)NMe-CH₂-C(O)OH,
-C(O)NMe-CH(Me)-C(O)OH,
-C(O)NMe-CH(F)-C(O)OH,
-C(O)NMe-CH(CF₃)-C(O)OH,
15 -C(O)NMe-CH(OH)-C(O)OH,
-C(O)NMe-CH(cyclopropyl)-C(O)OH,
-C(O)NMe-C(Me)₂-C(O)OH,
-C(O)NMe-CF(Me)-C(O)OH,
-C(O)NMe-C(Me)(CF₃)-C(O)OH,
20 -C(O)NMe-C(Me)(OH)-C(O)OH,
-C(O)NMe-5-tetrazolyl,
-C(O)NMe-C(Me)(cyclopropyl)-C(O)OH, or
-C(O)-NH-5-tetrazolyl.

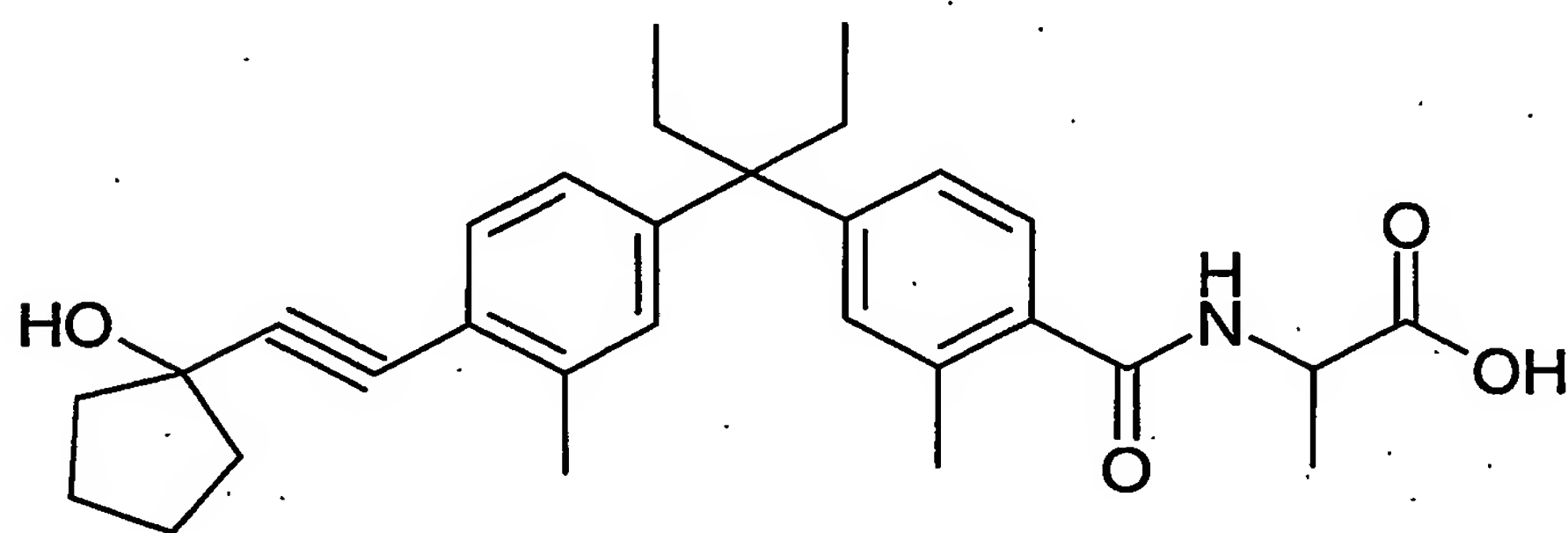
25 5. The compound represented by formula (AA-1) to (AA-33) or a
pharmaceutically acceptable salt or prodrug derivative thereof:

AA-1)

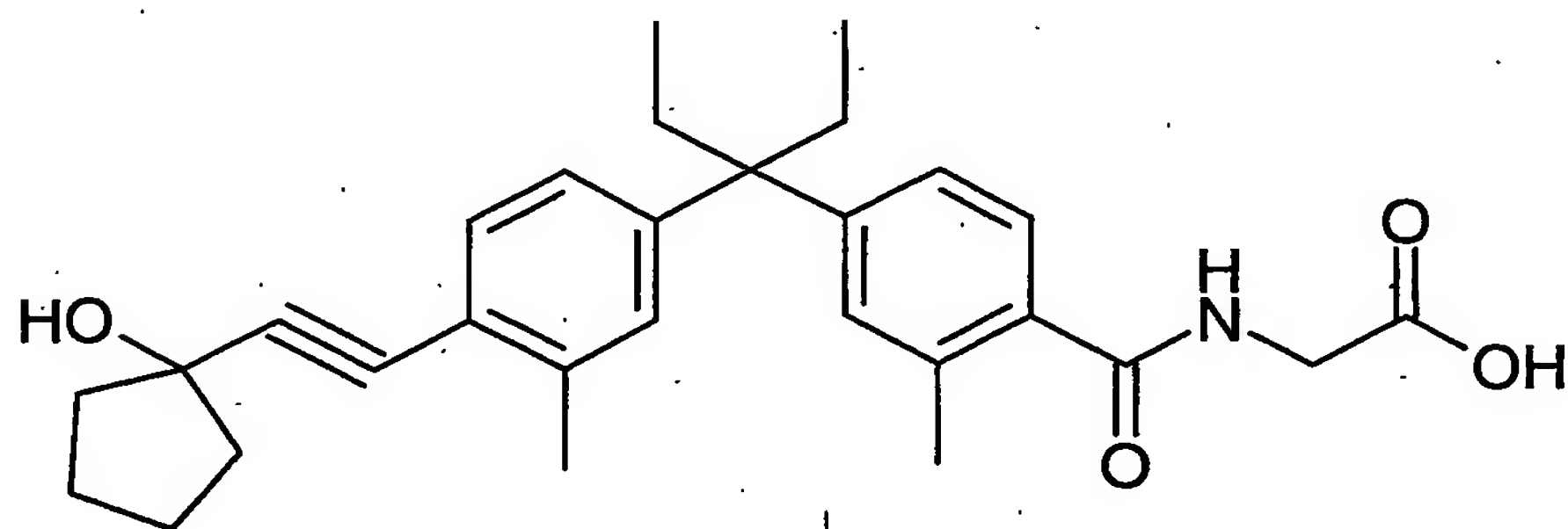
-132-



AA-2)

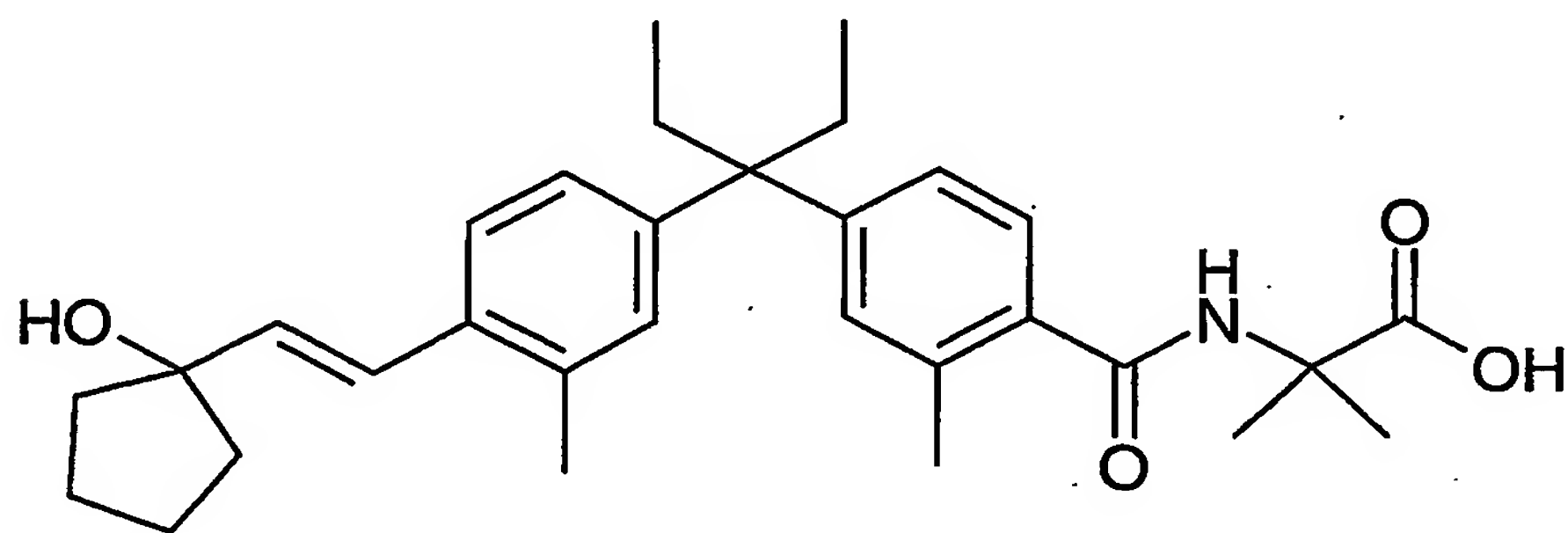


AA-3)



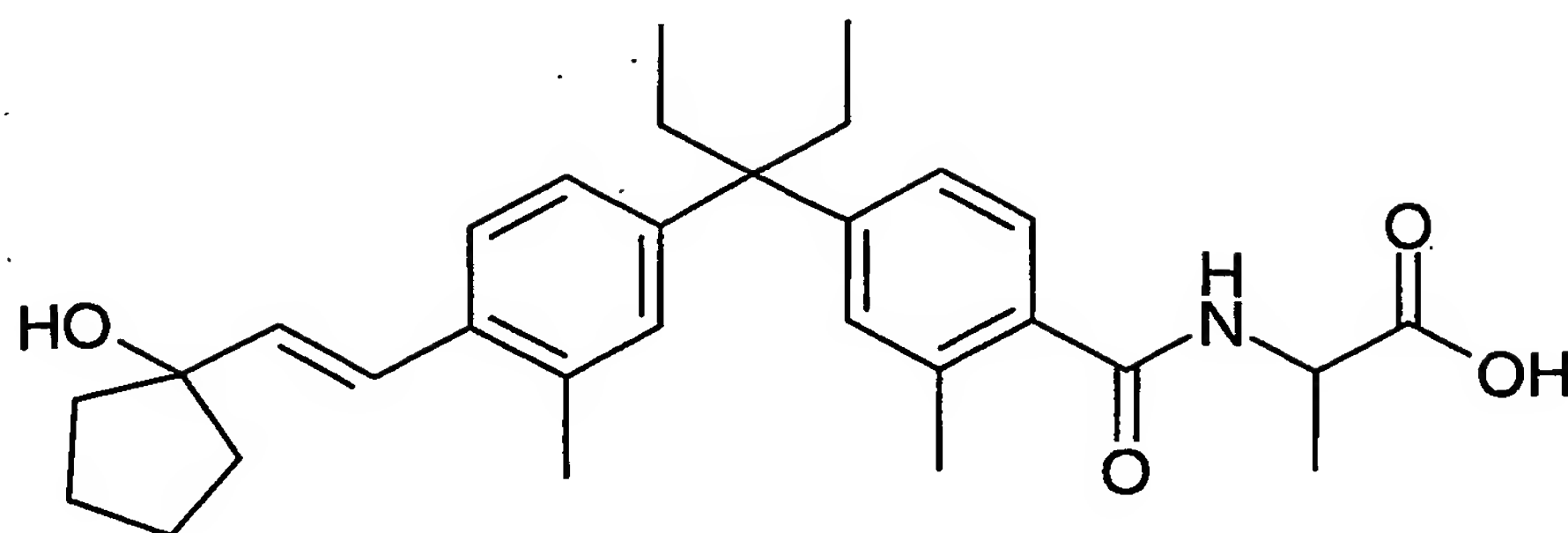
5

AA-4)

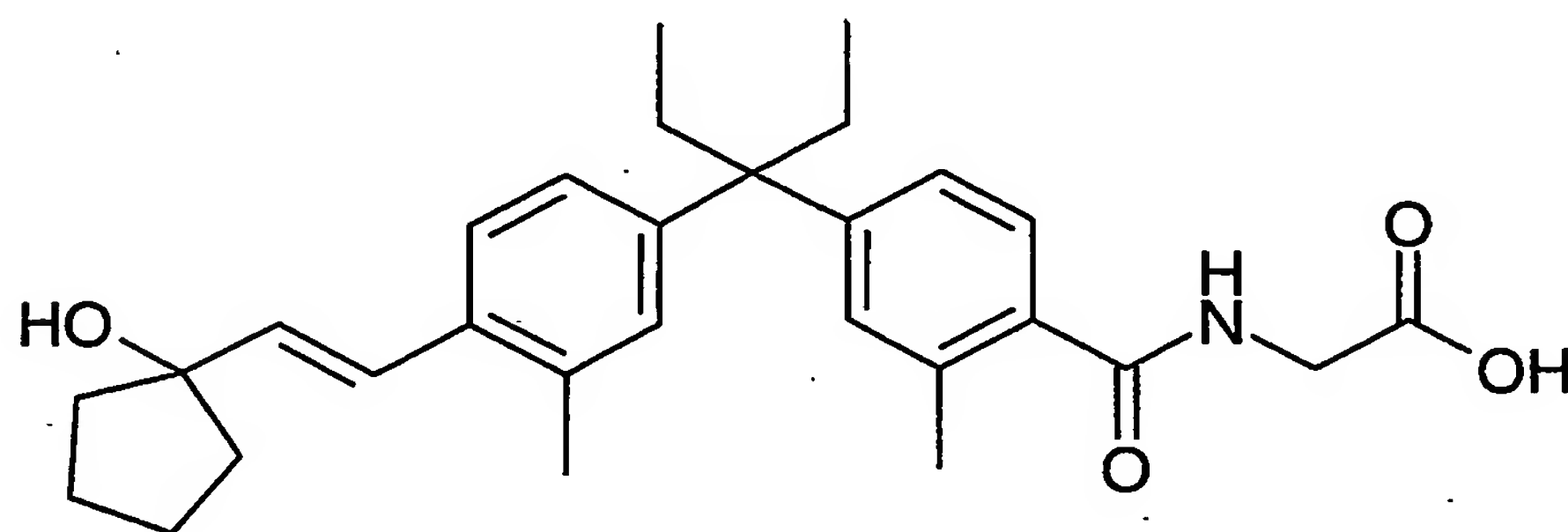


AA-5)

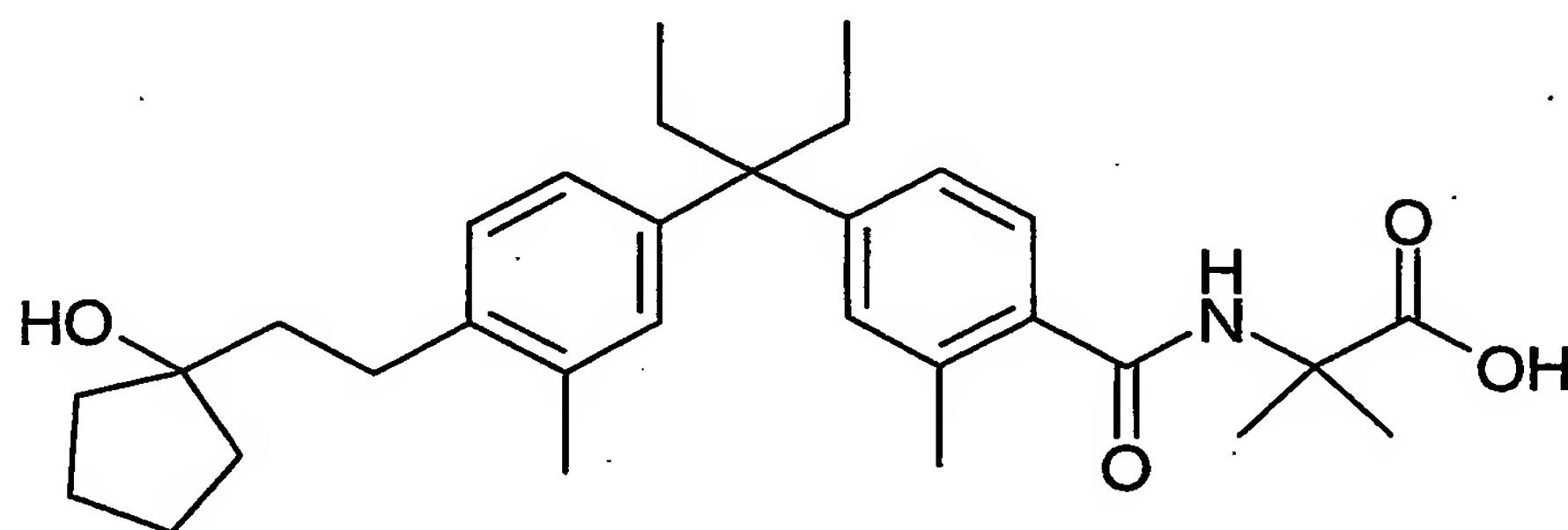
-133-



AA-6)

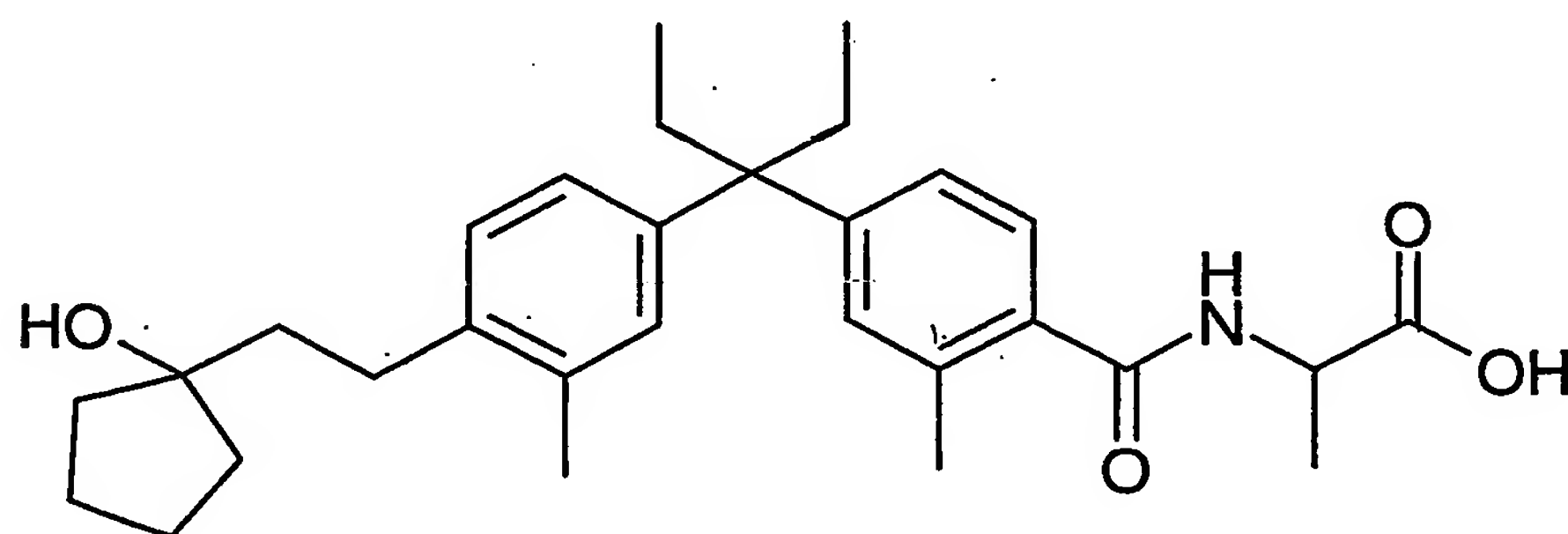


AA-7)



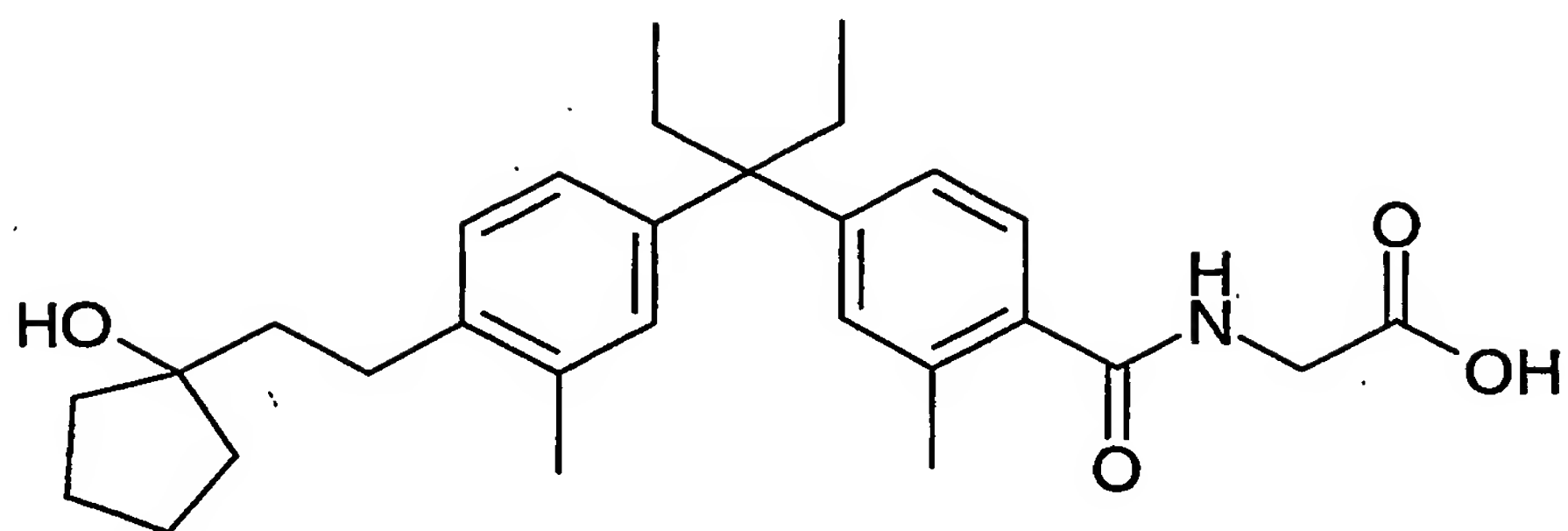
5

AA-8)

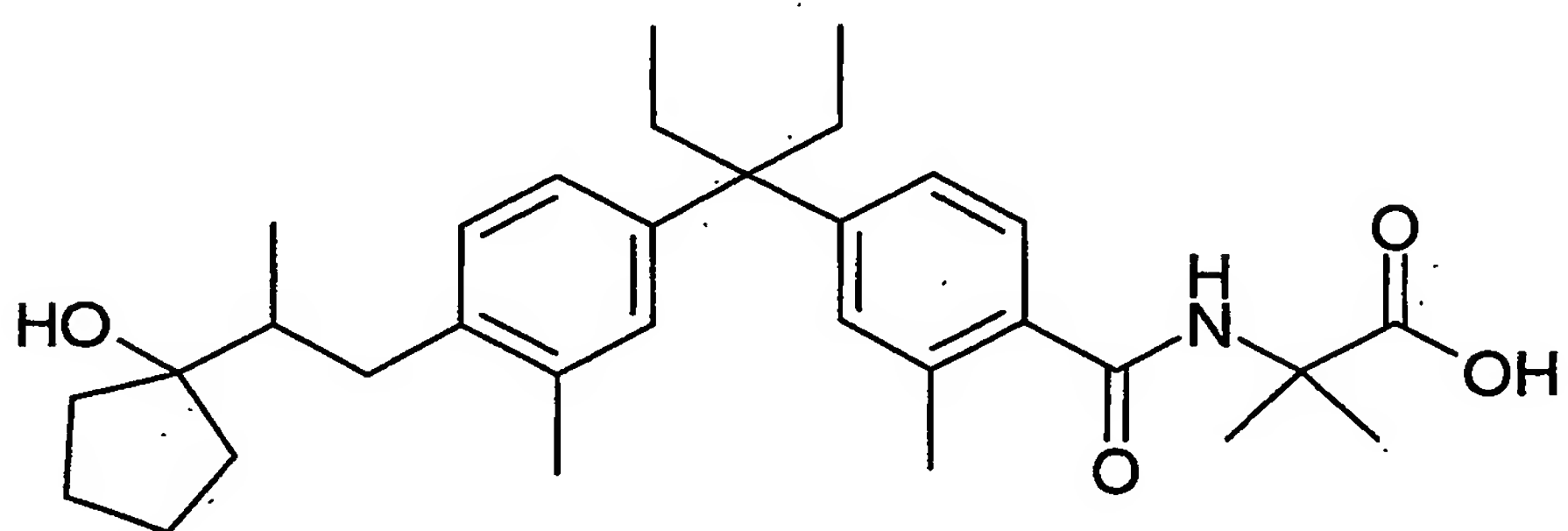


AA-9)

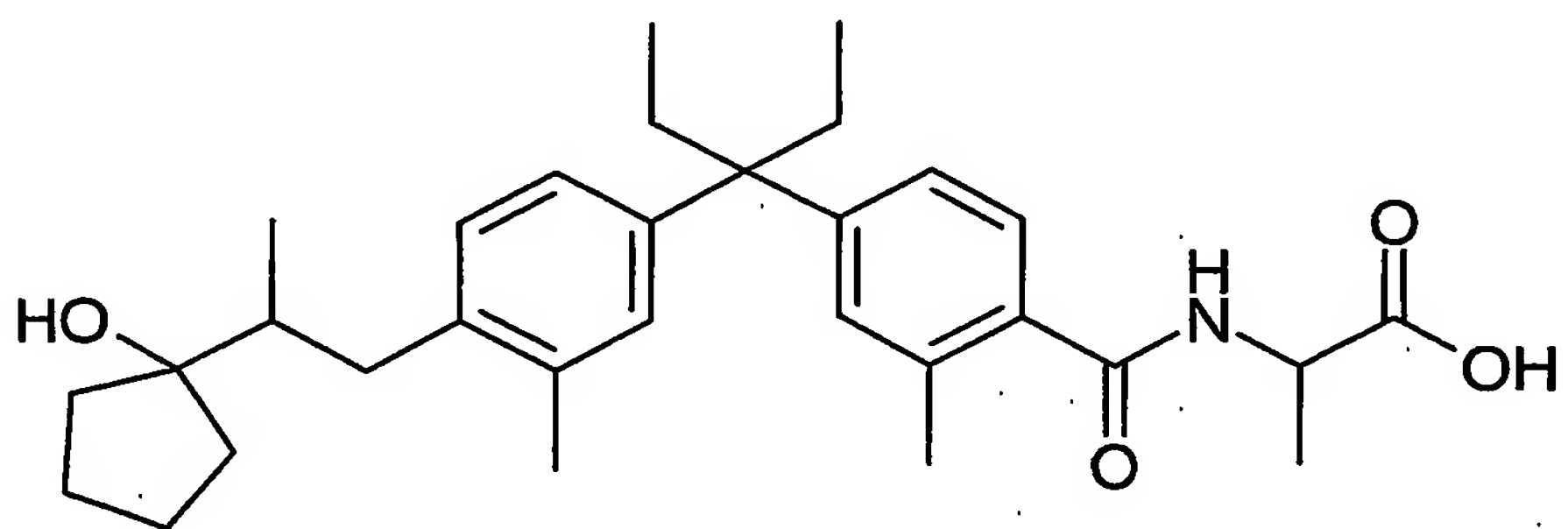
-134-



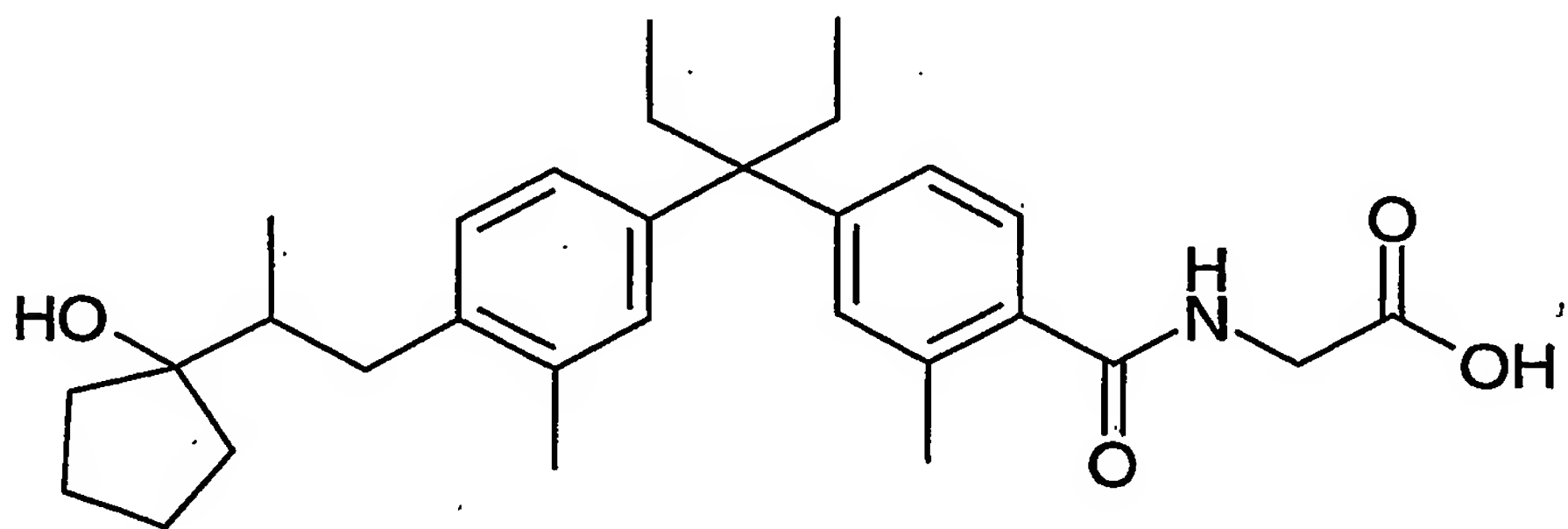
AA-10)



AA-11)

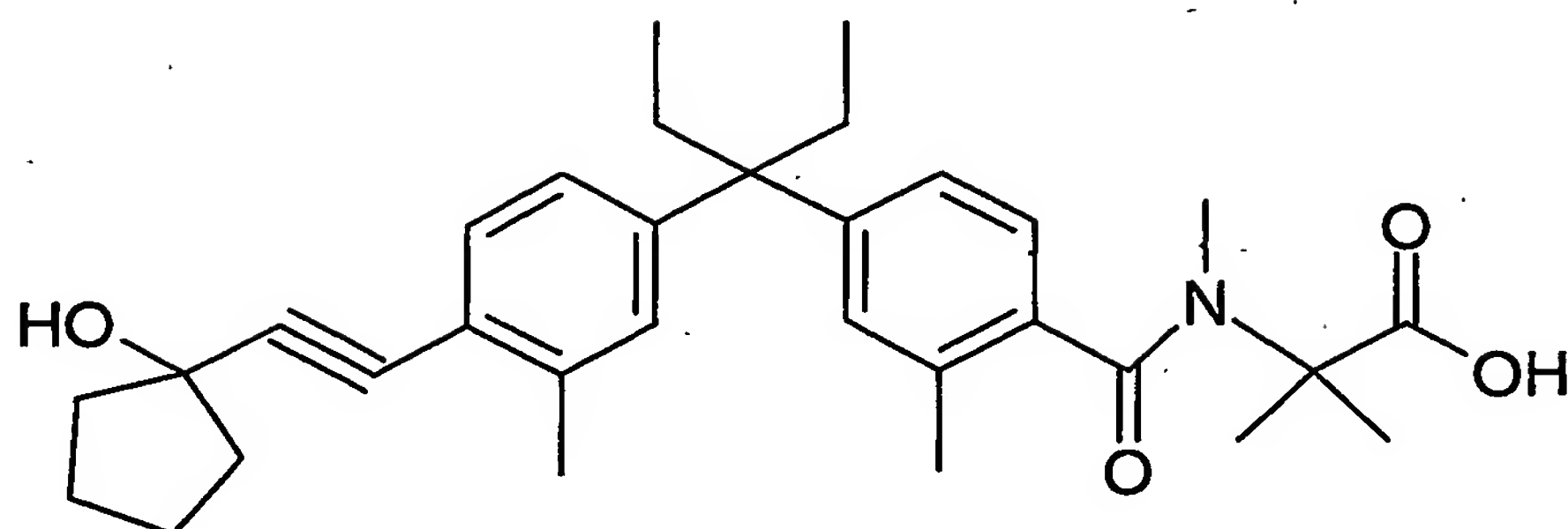


AA-12)

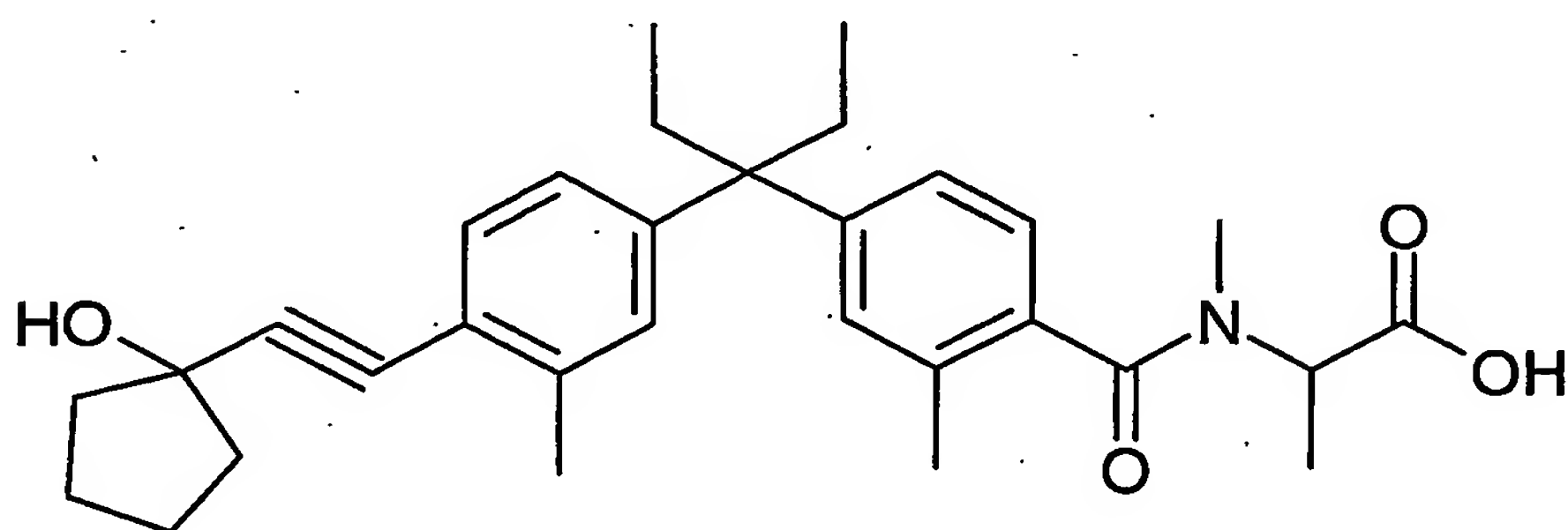


AA-13)

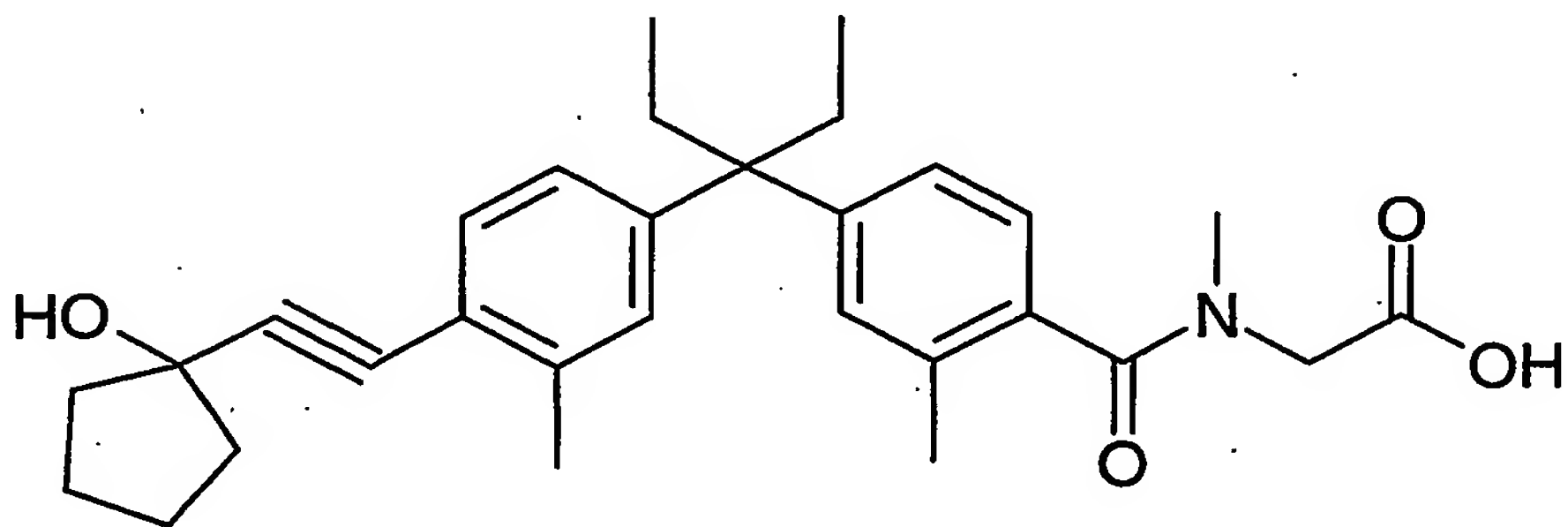
-135-



AA-14)

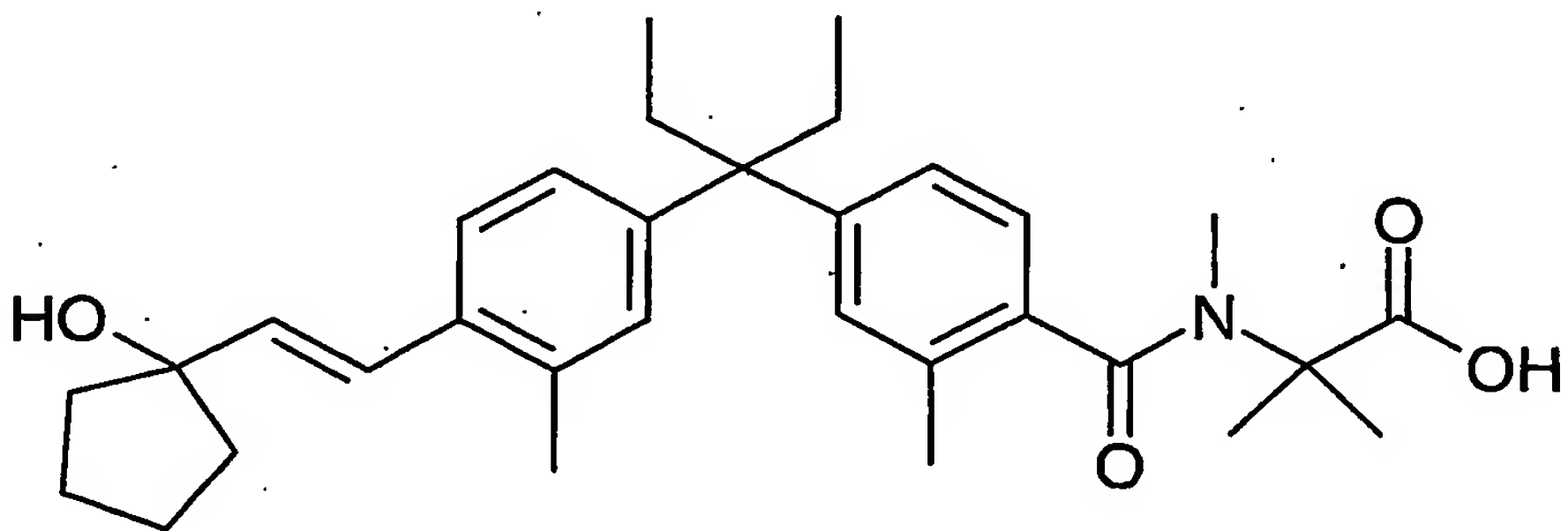


AA-15)



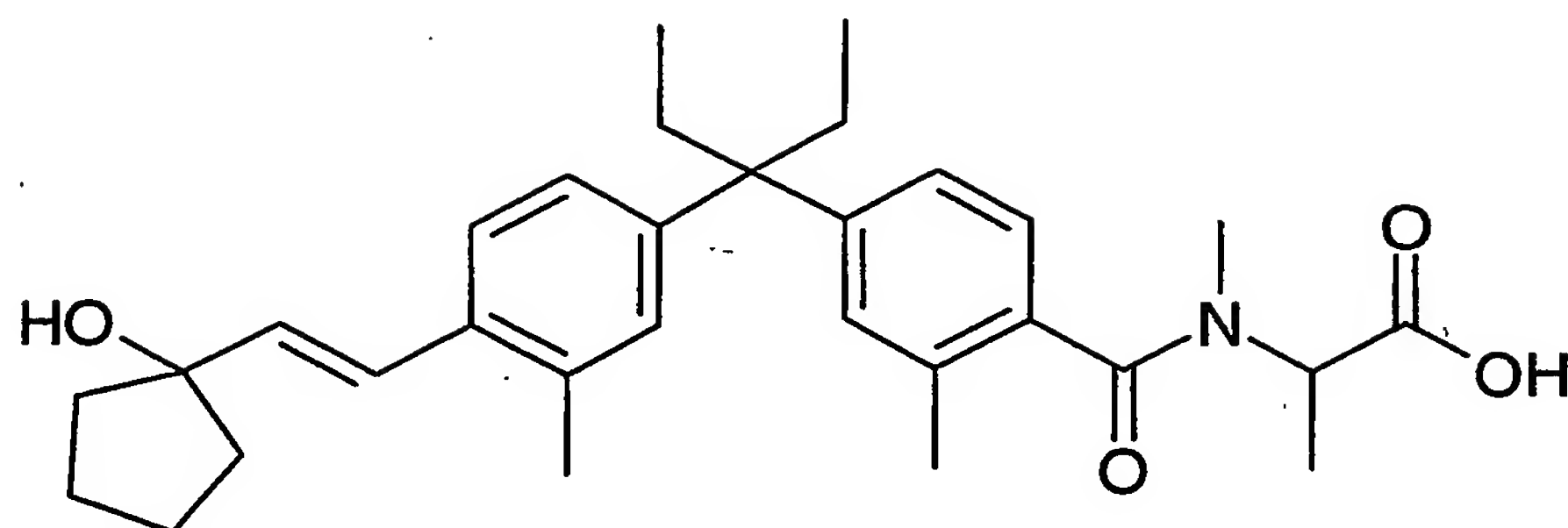
5

AA-16)

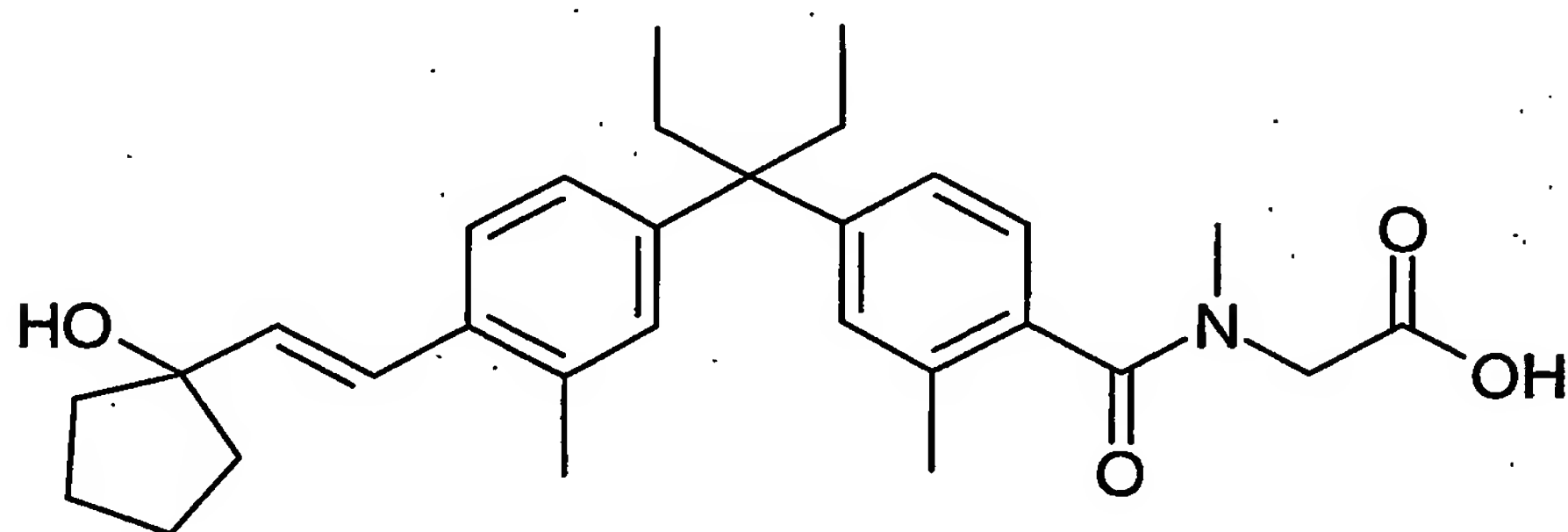


AA-17)

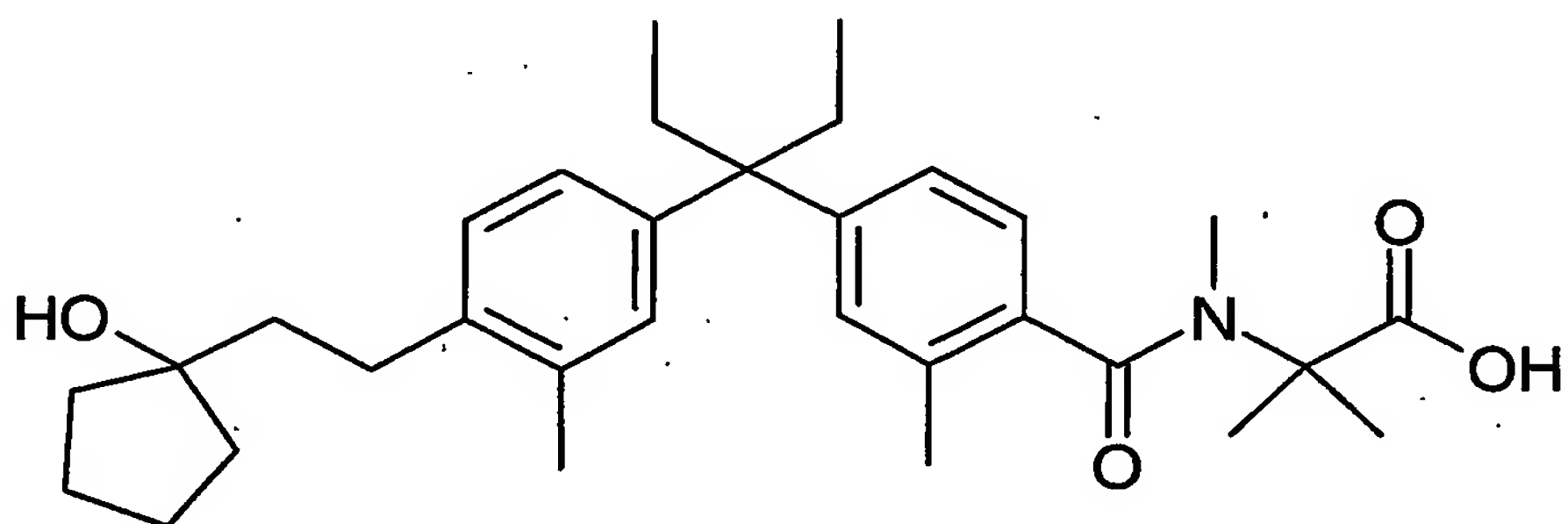
-136-



AA-18)

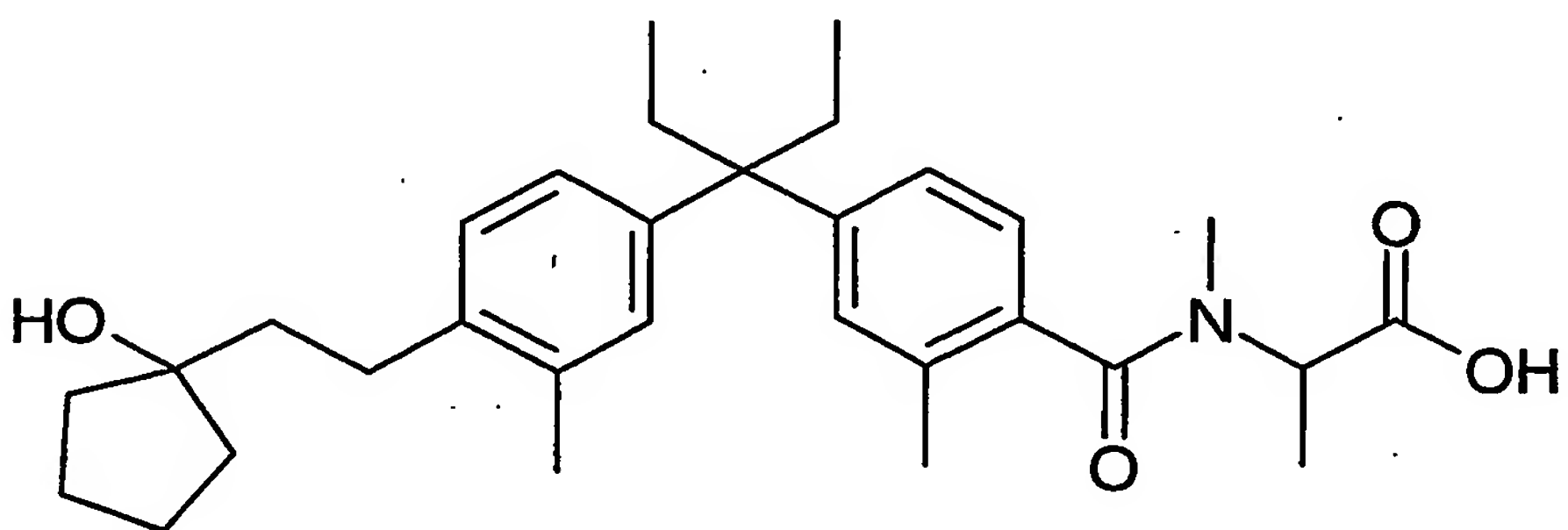


AA-19)



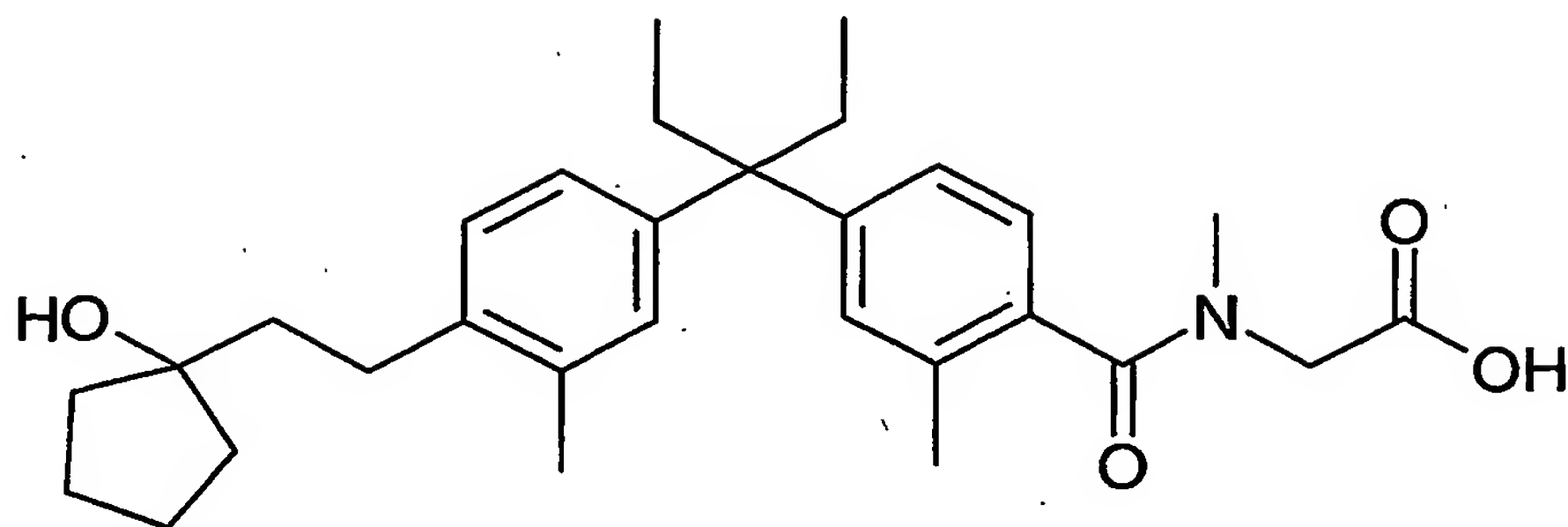
5

AA-20)

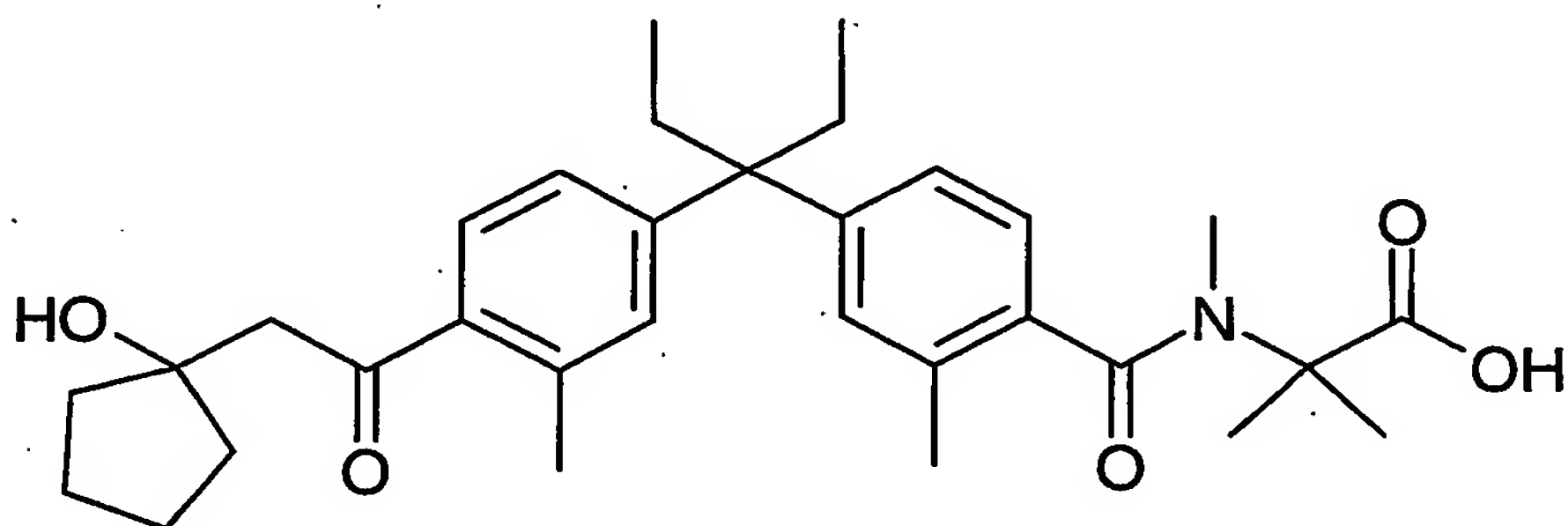


AA-21)

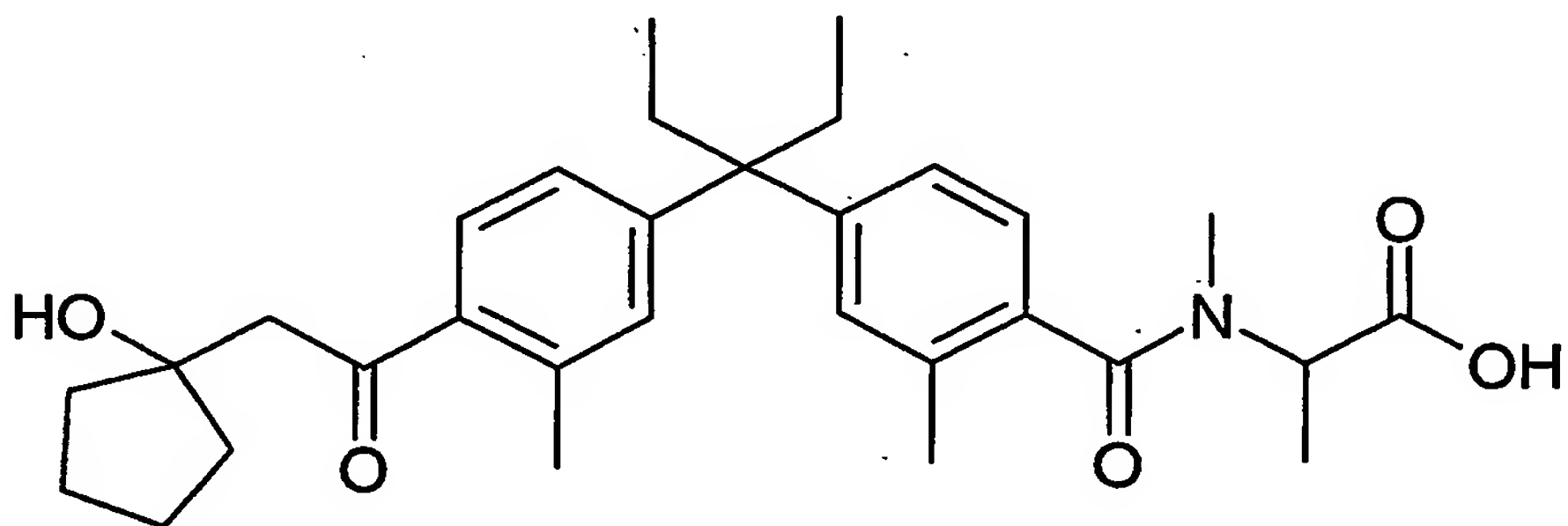
-137-



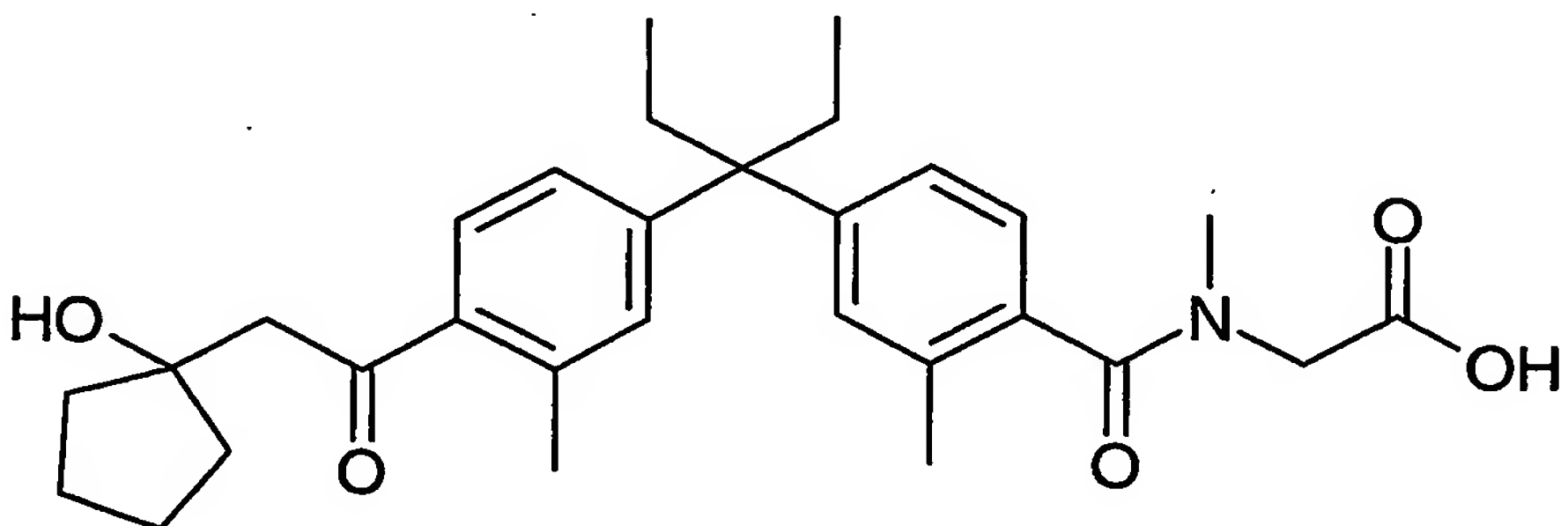
AA-22)



AA-23)

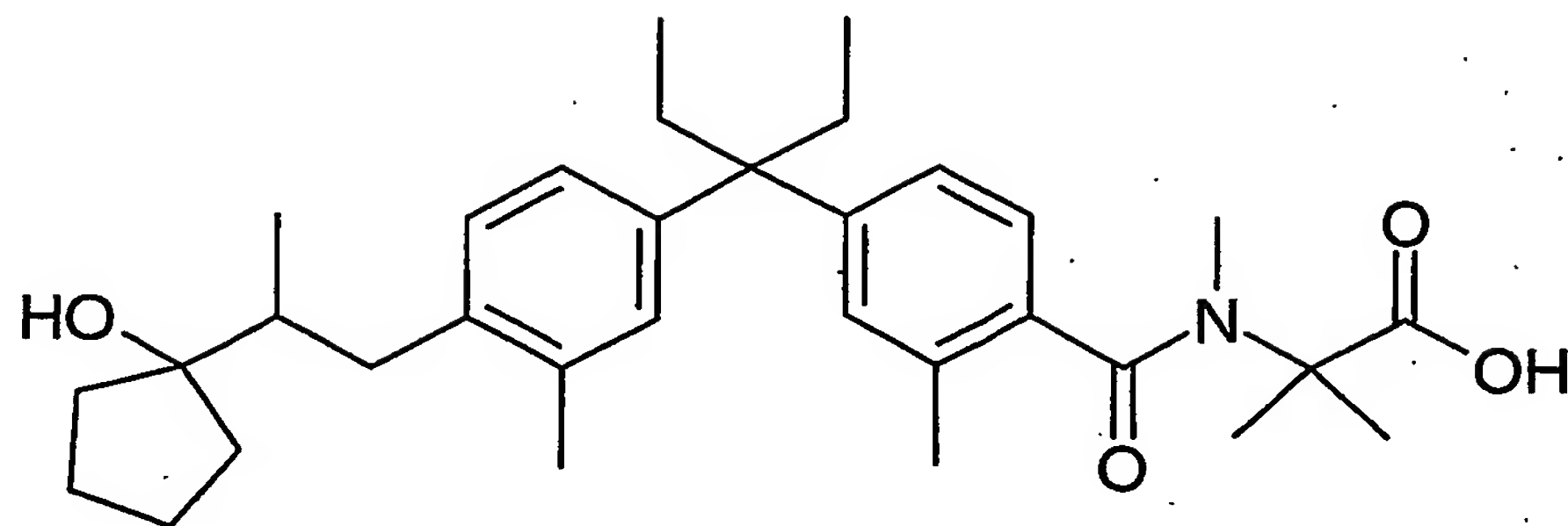


AA-24)

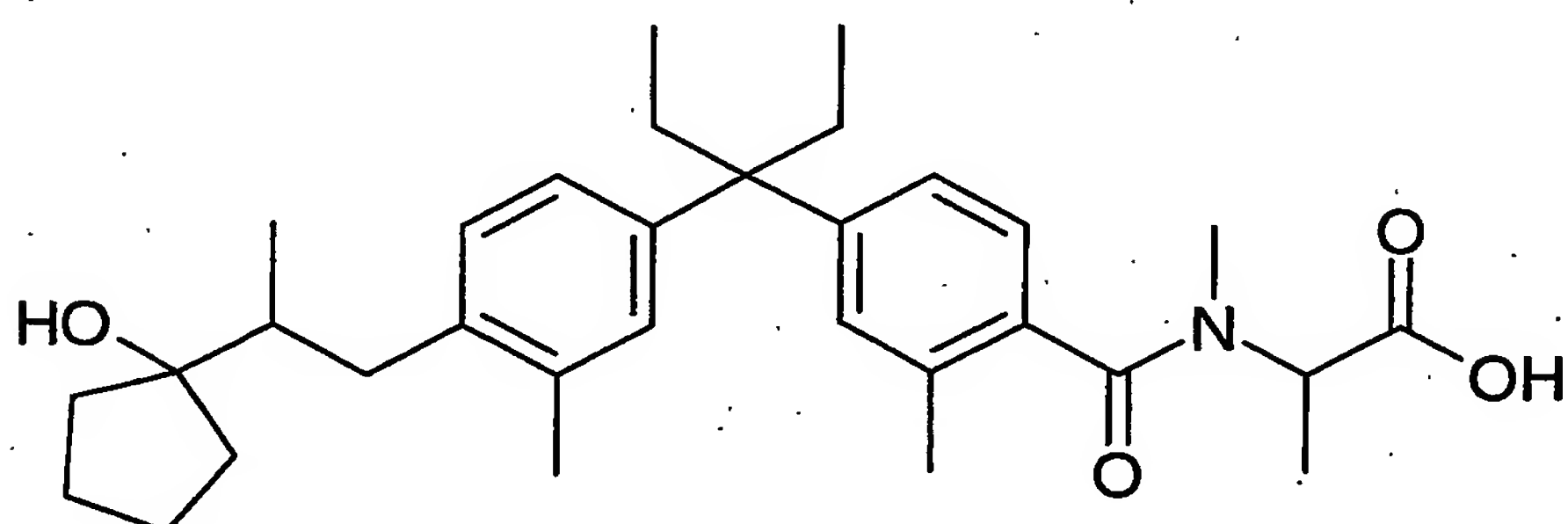


AA-25)

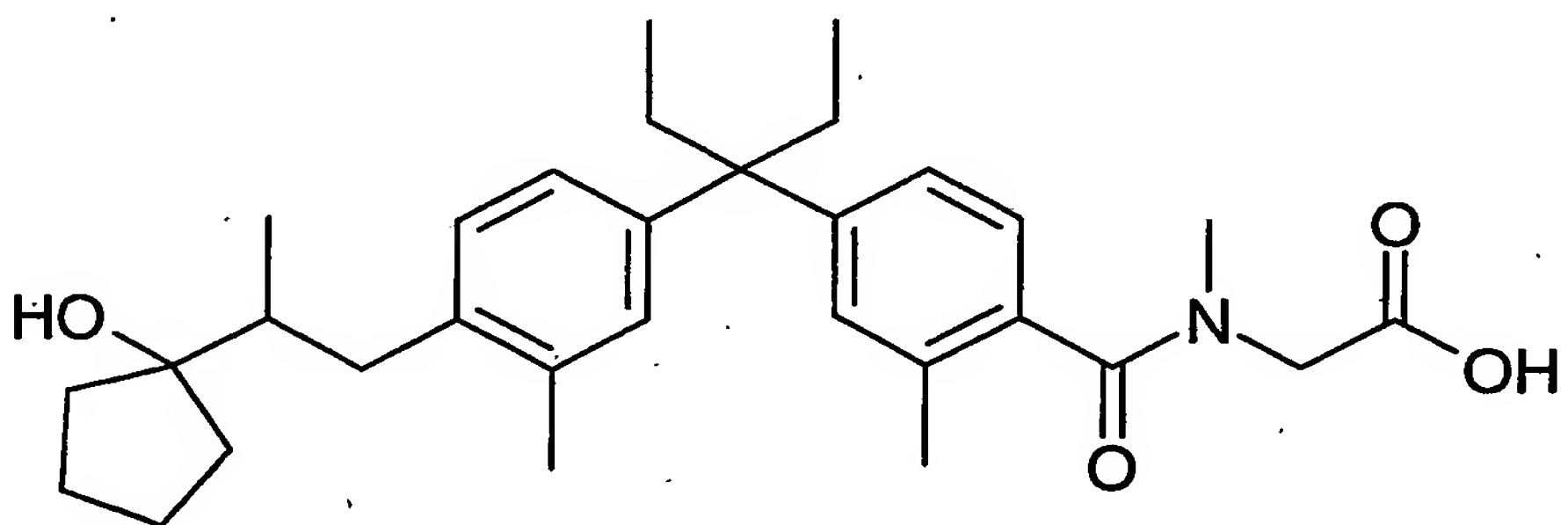
-138-



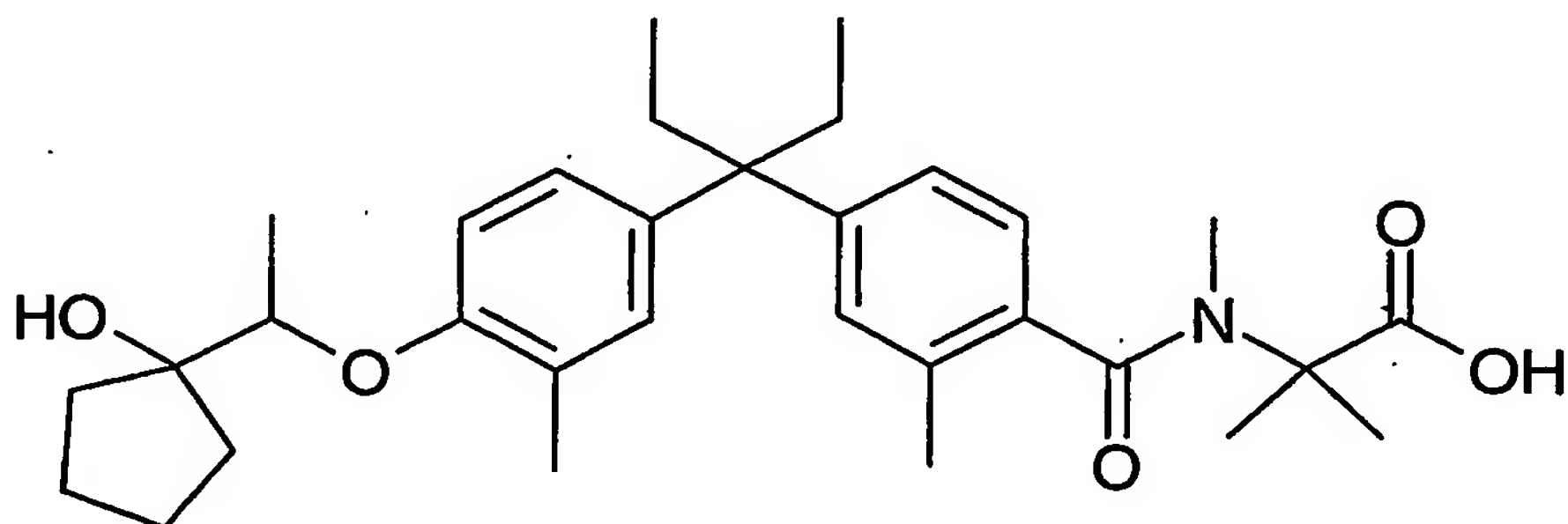
AA-26)



AA-27)

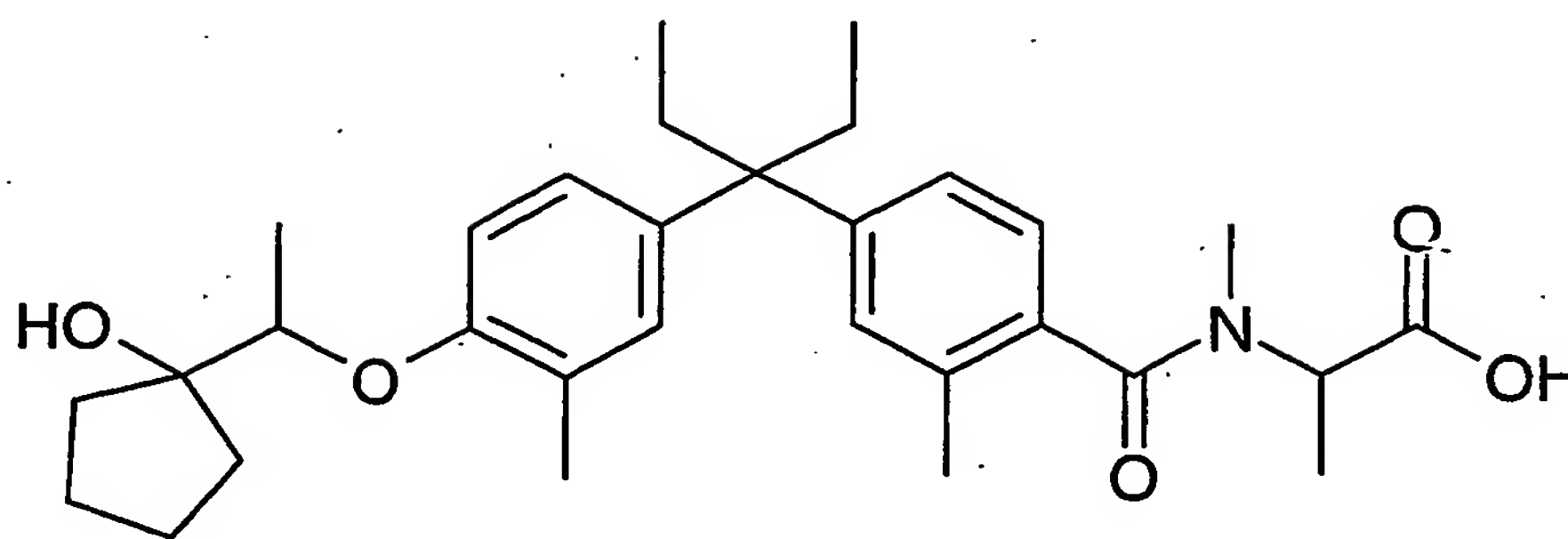


AA-28)

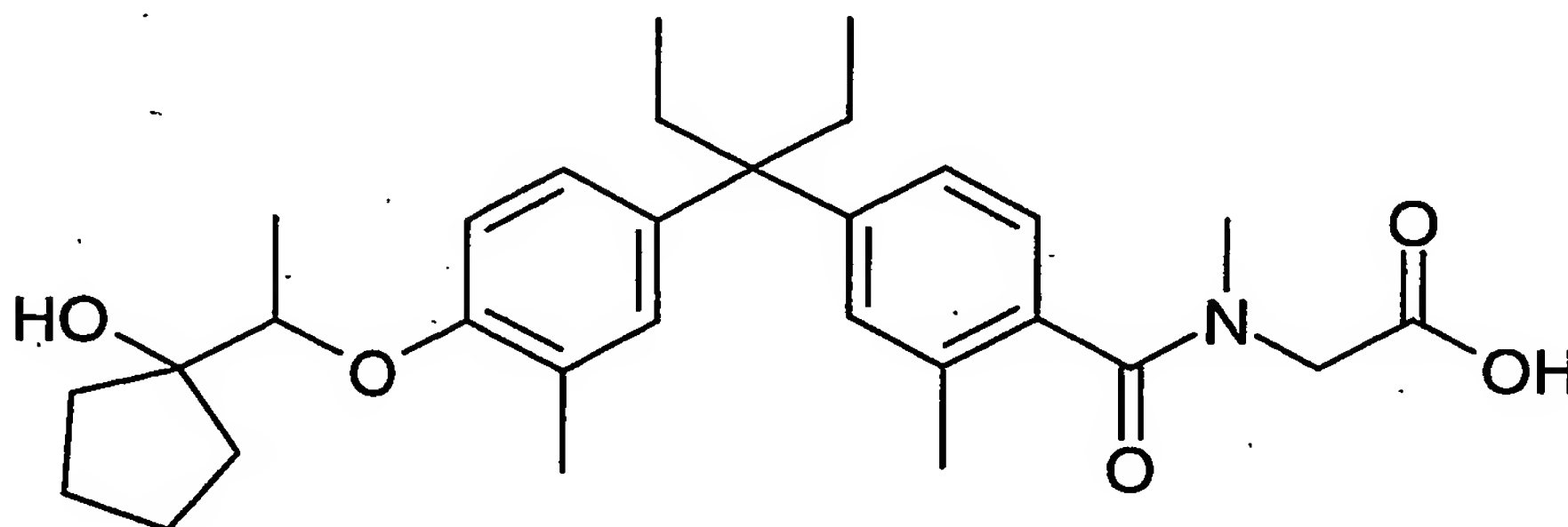


AA-29)

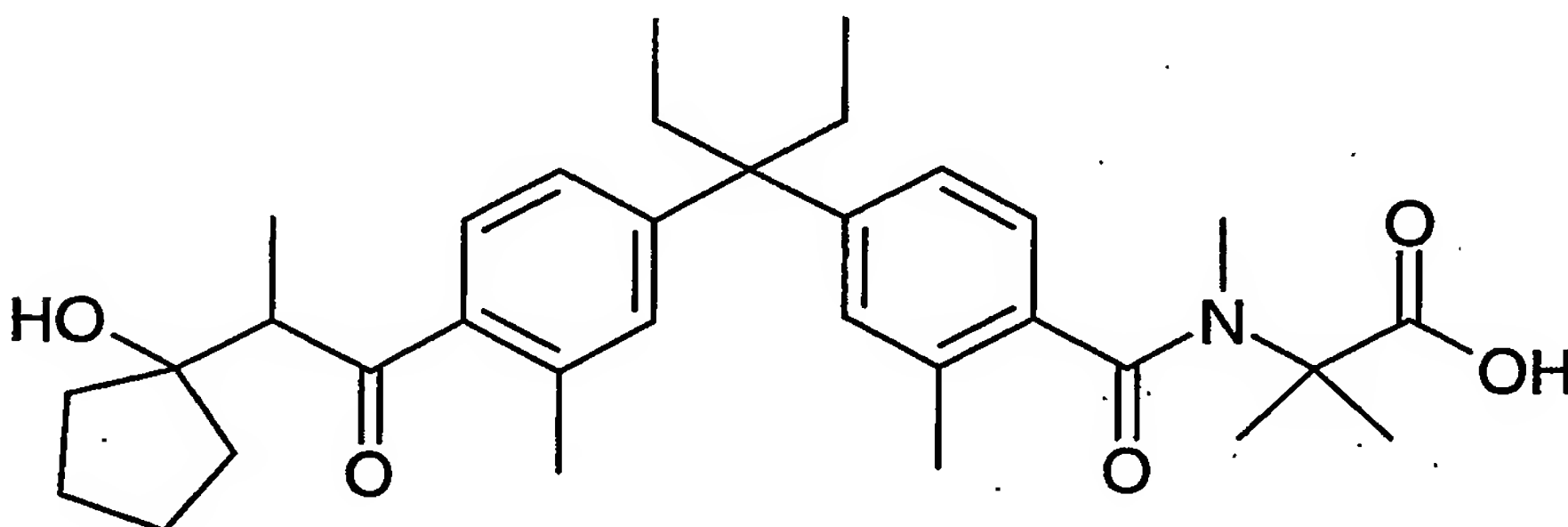
-139-



AA-30)

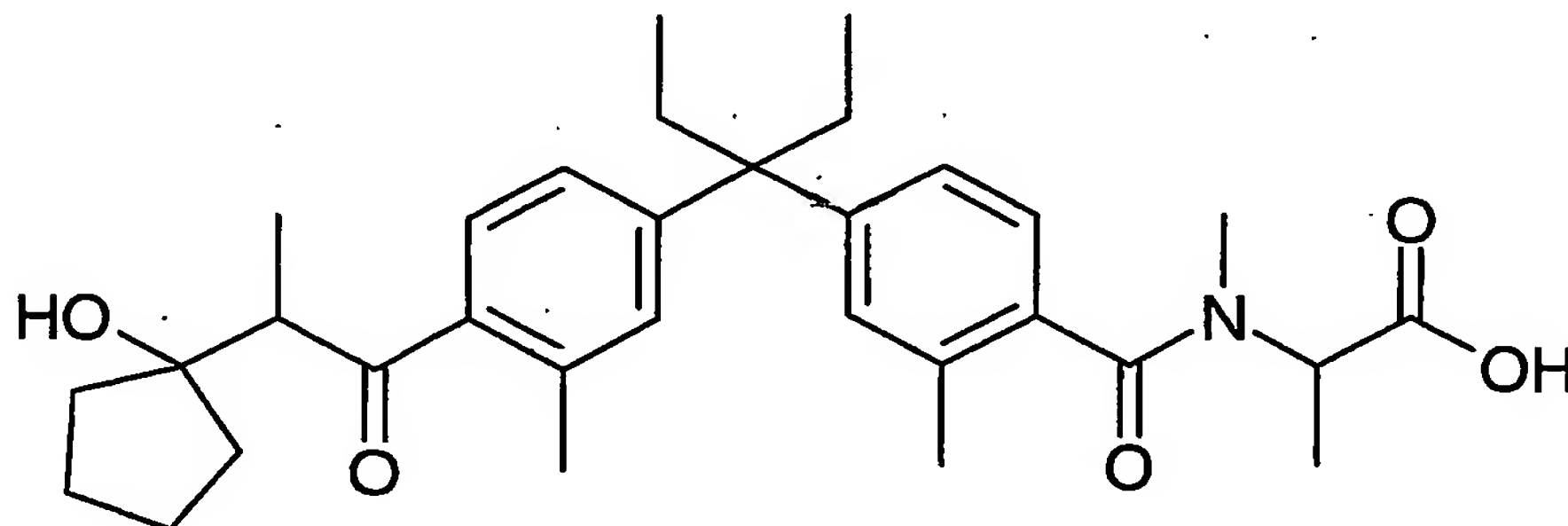


AA-31)



5

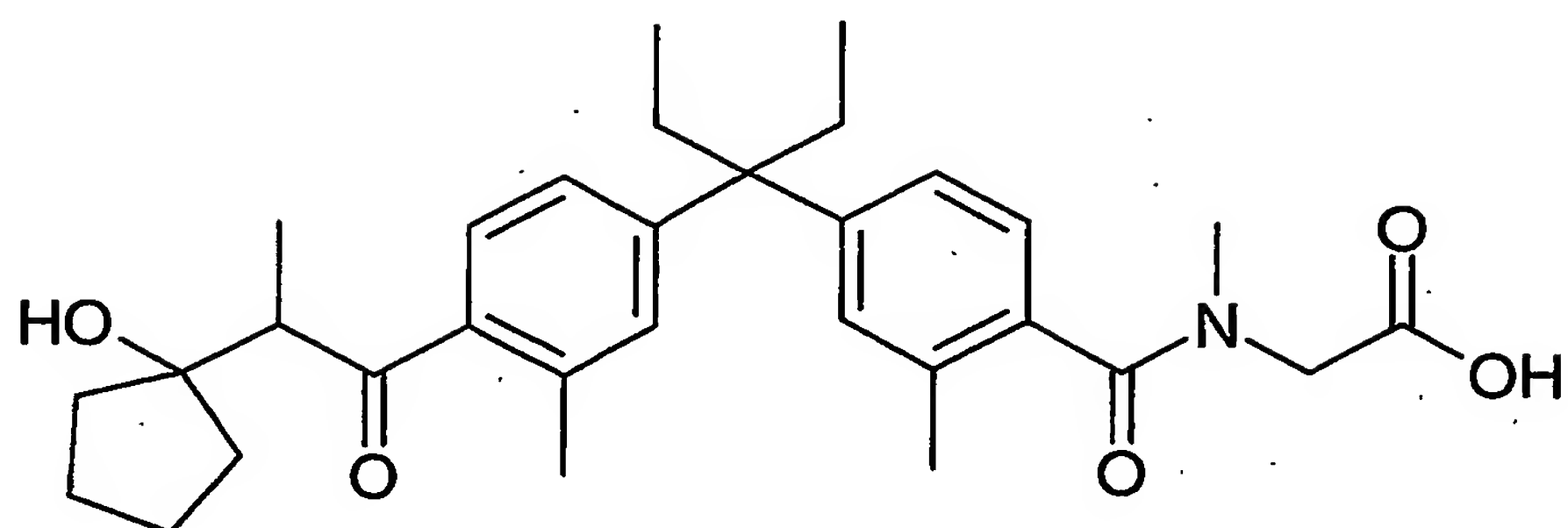
AA-32)



or

AA-33)

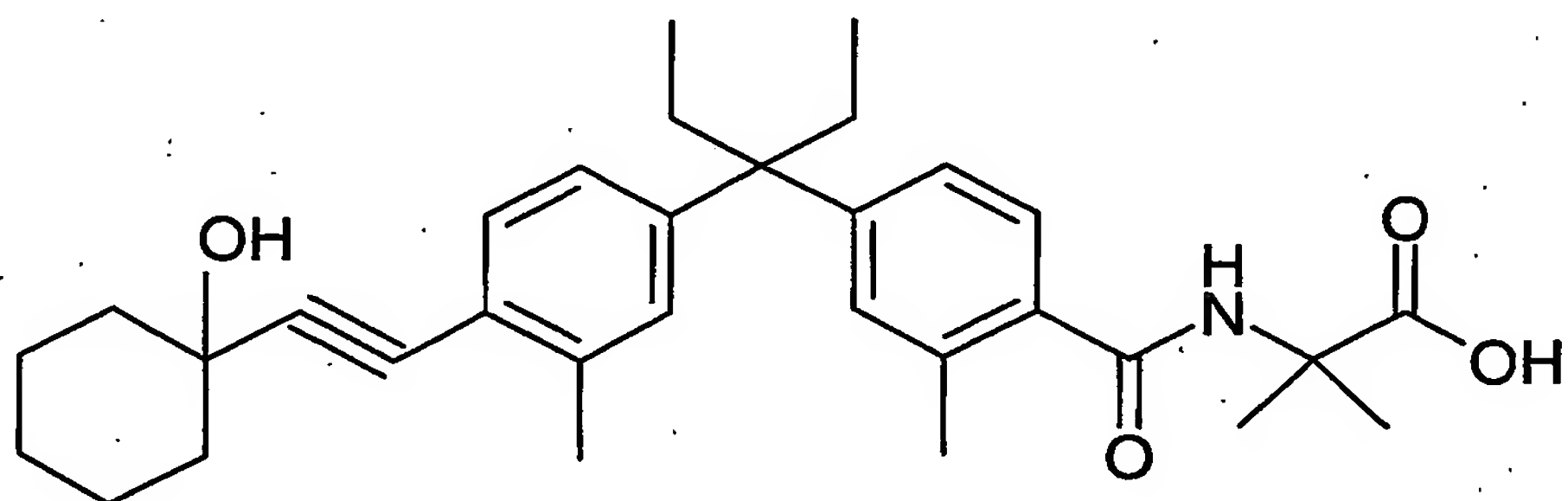
-140-



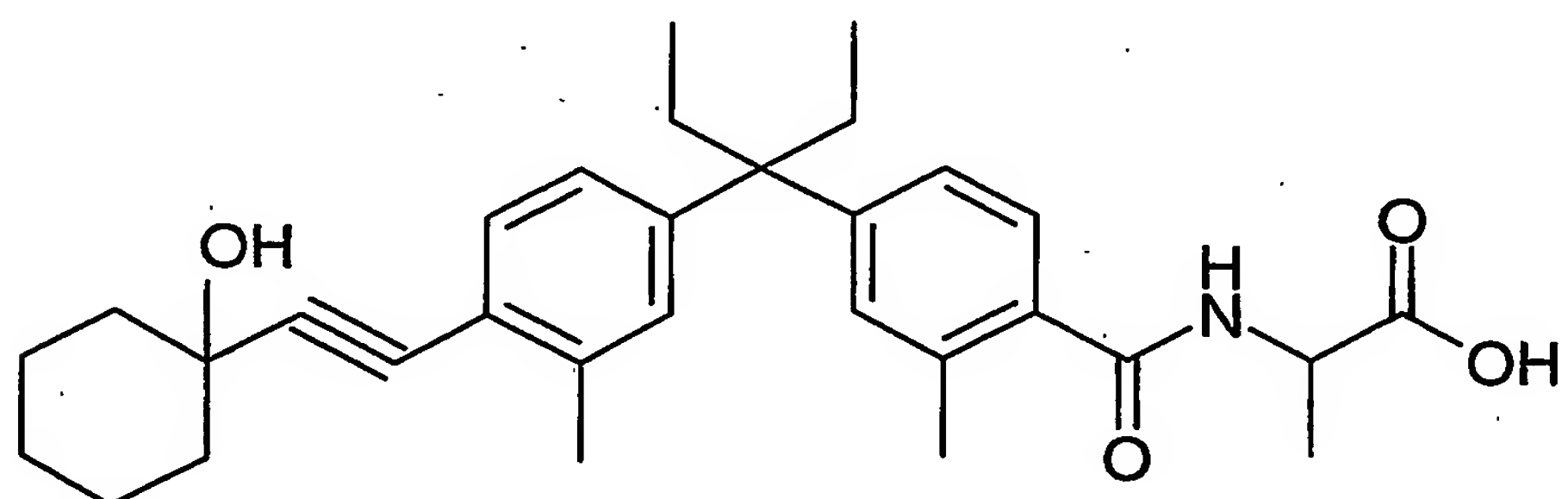
6. The compound represented by formula (BB-1) to (BB-33) or a pharmaceutically acceptable salt or prodrug derivative thereof:

5

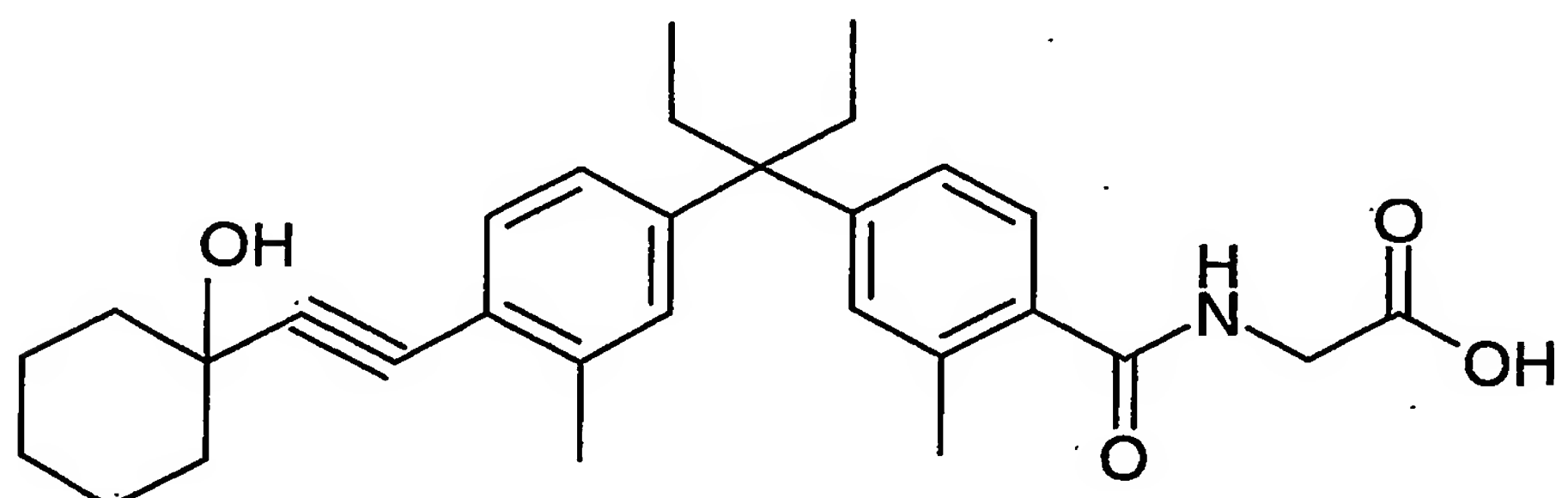
BB-1)



BB-2)

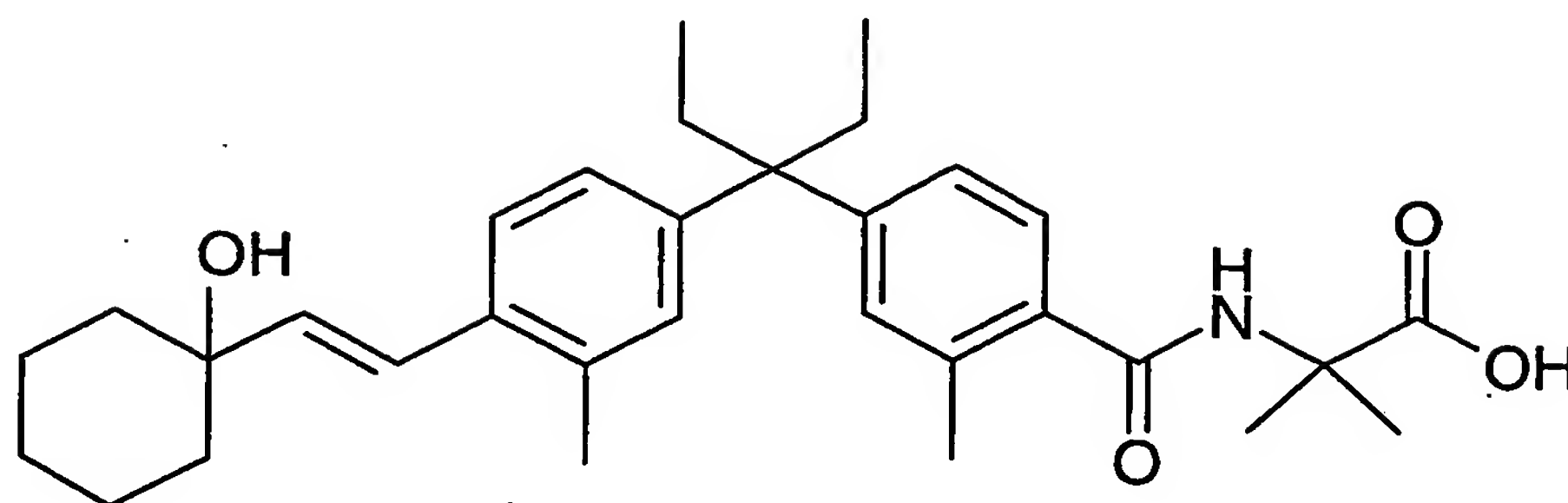


BB-3)

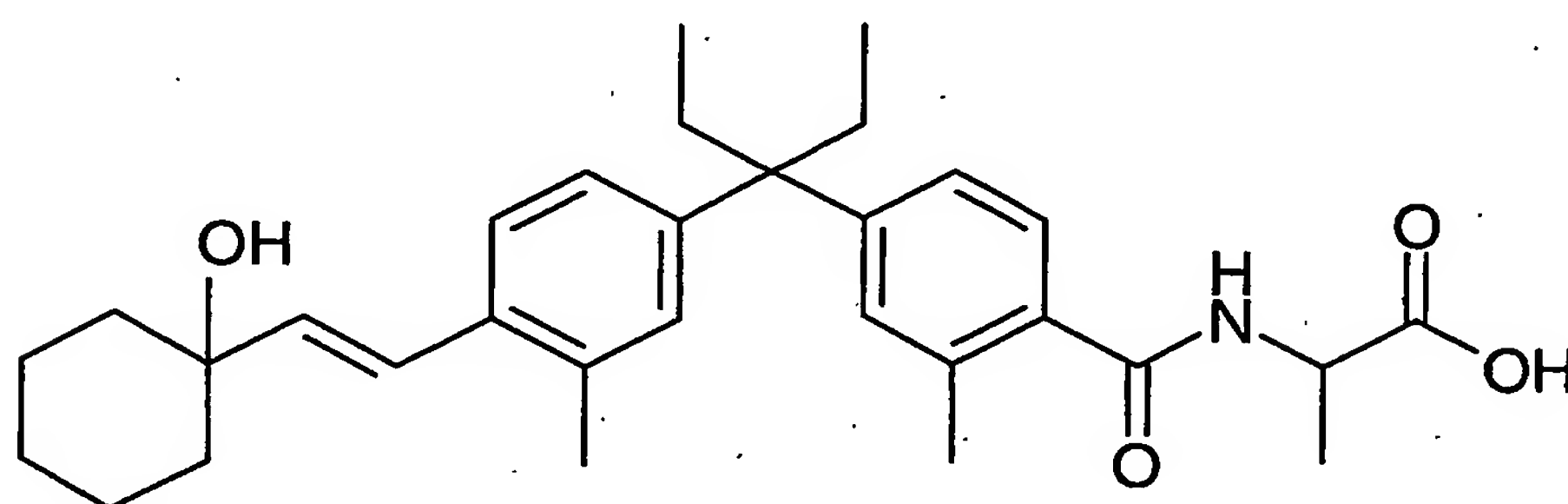


-141-

BB-4)

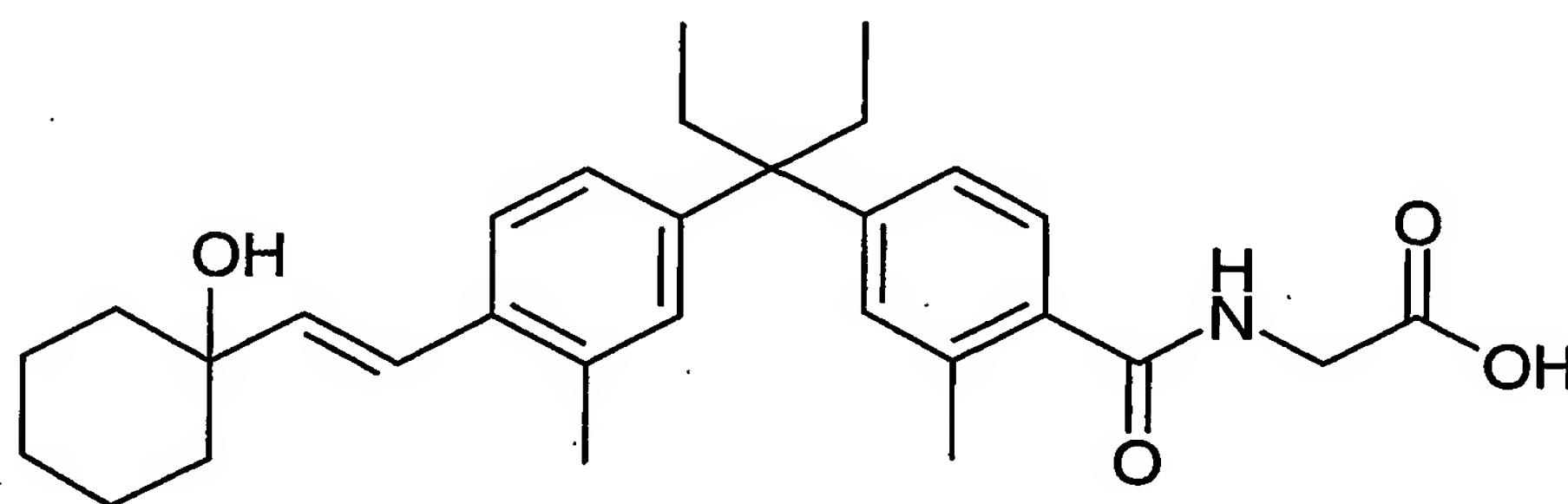


BB-5)

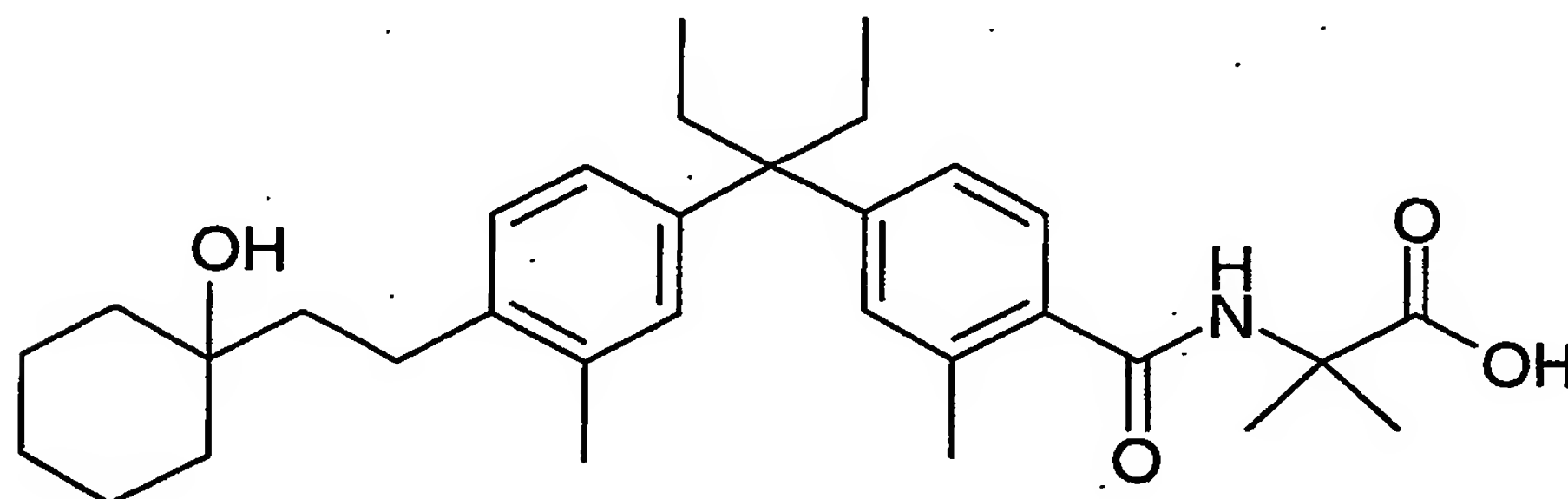


5

BB-6)

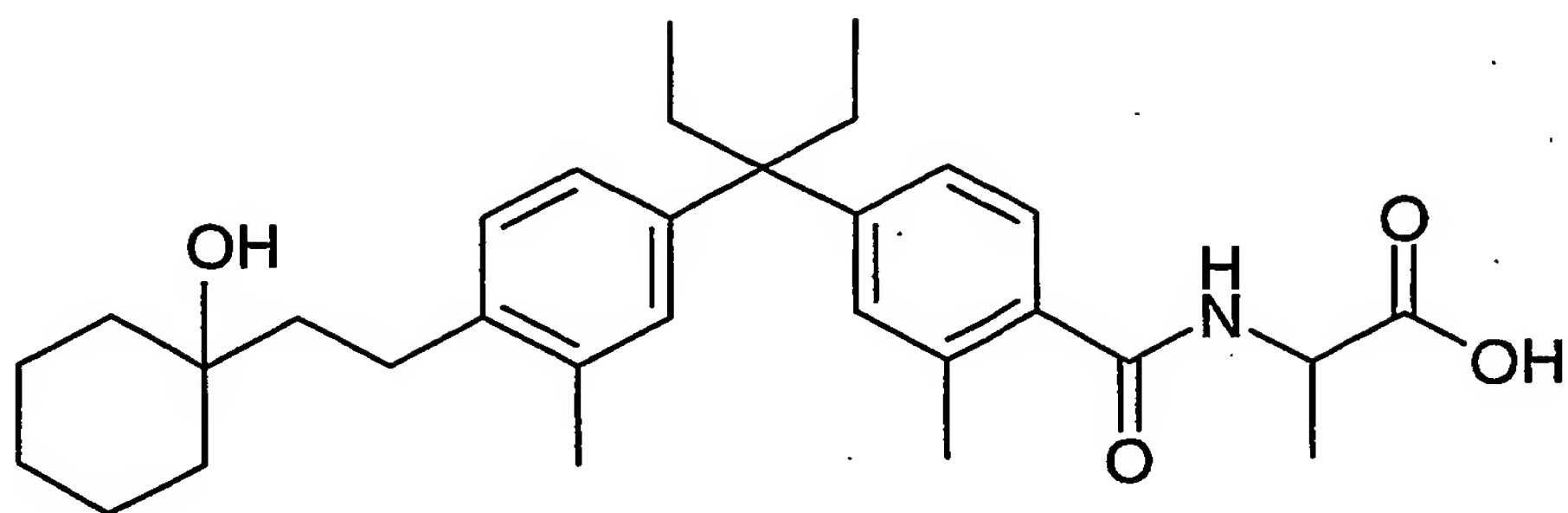


BB-7)

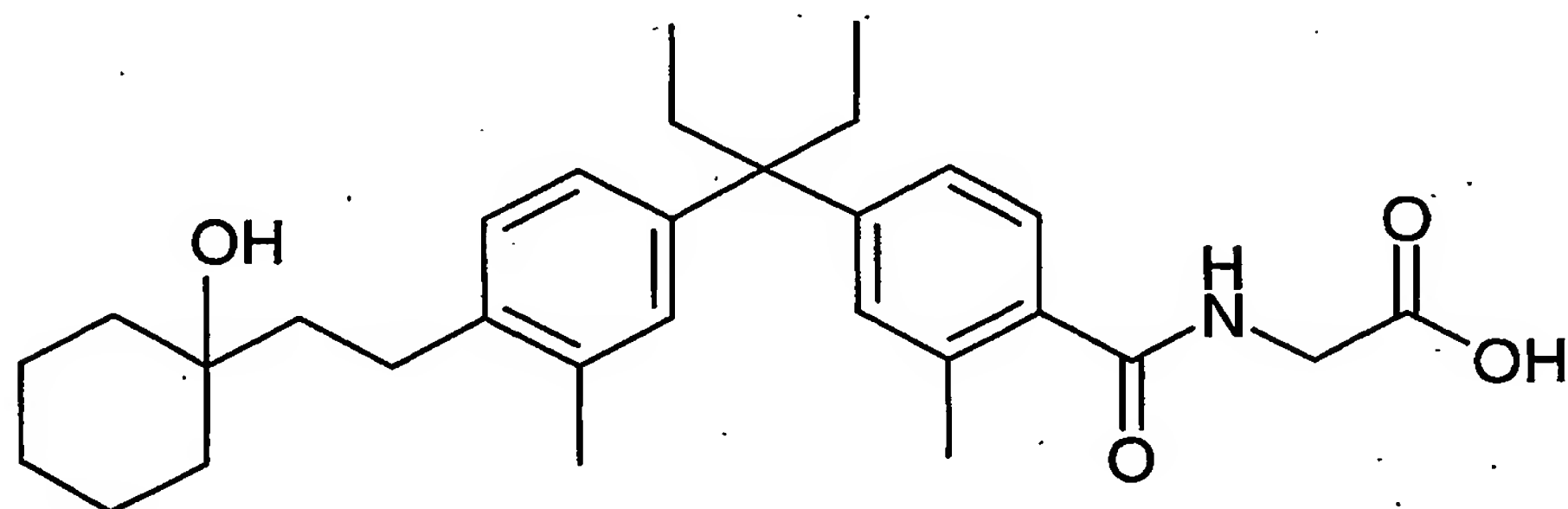


BB-8)

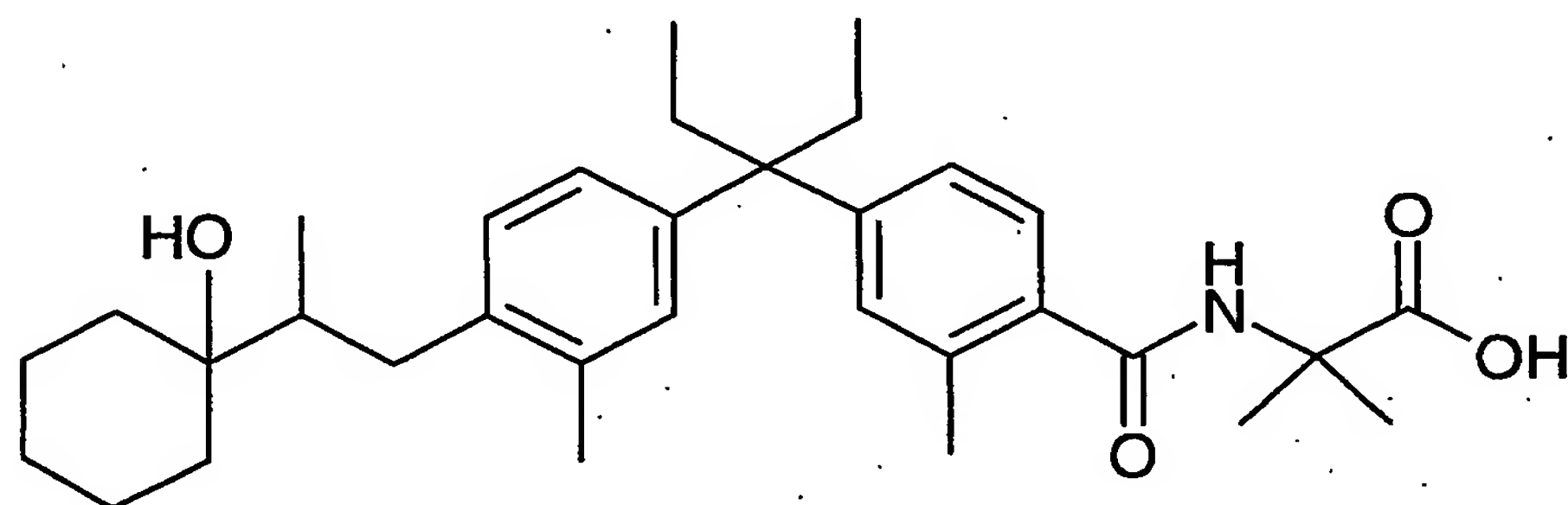
-142-



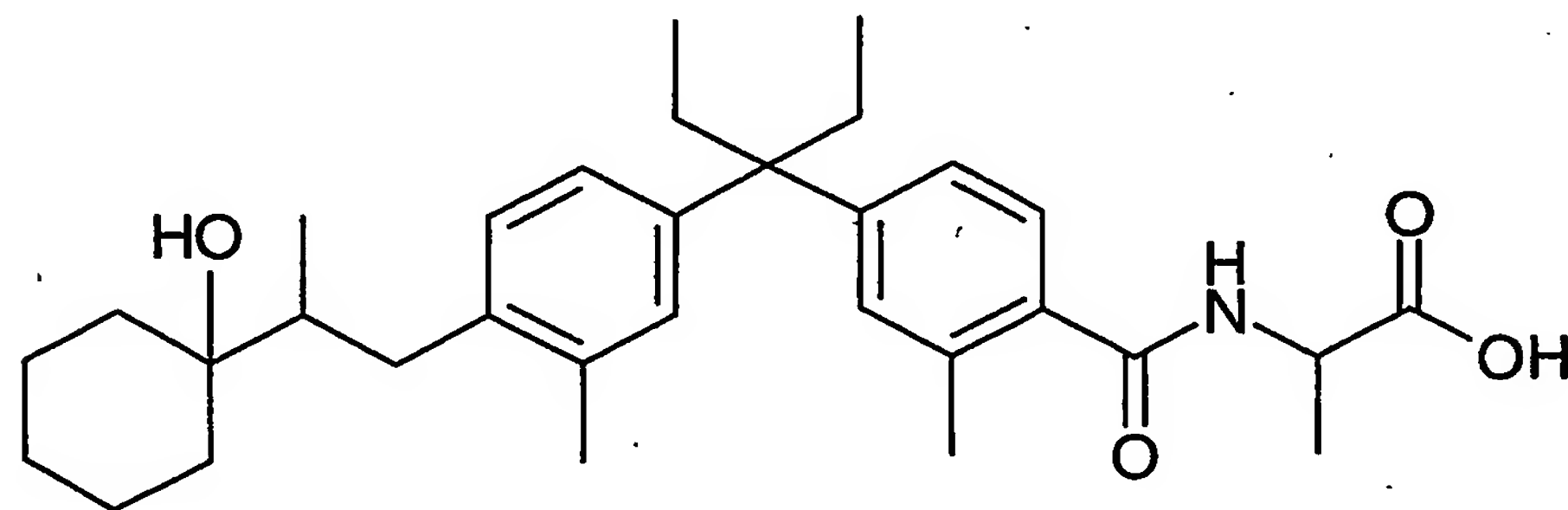
BB-9)



BB-10)

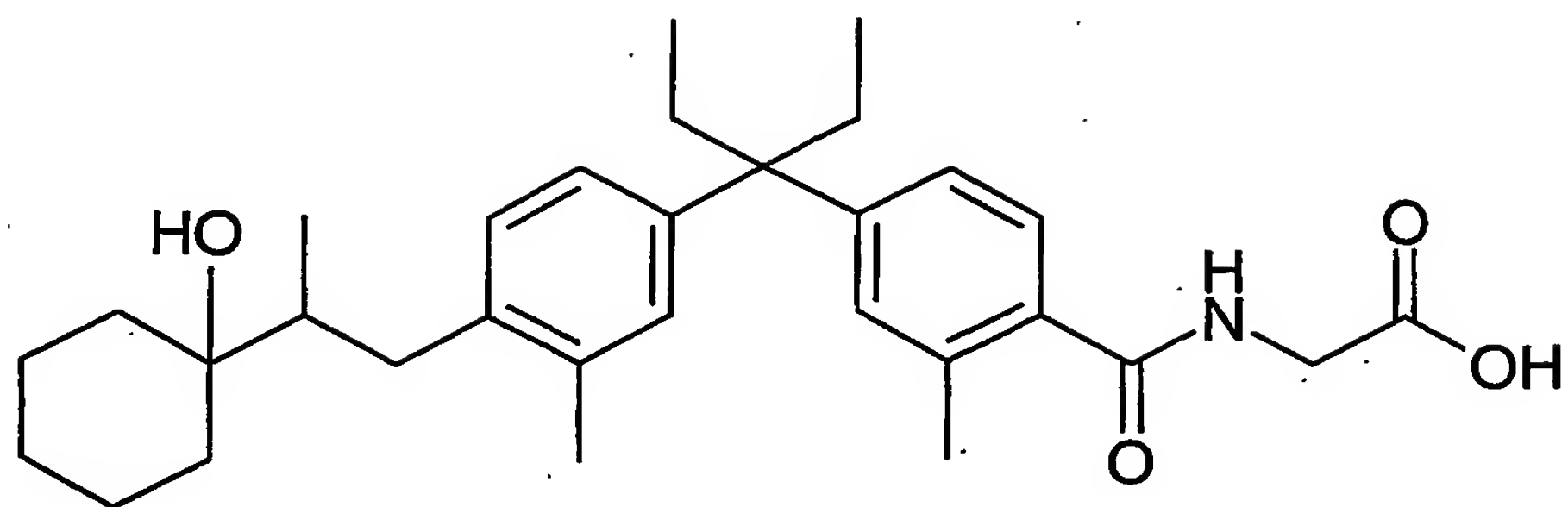


BB-11)

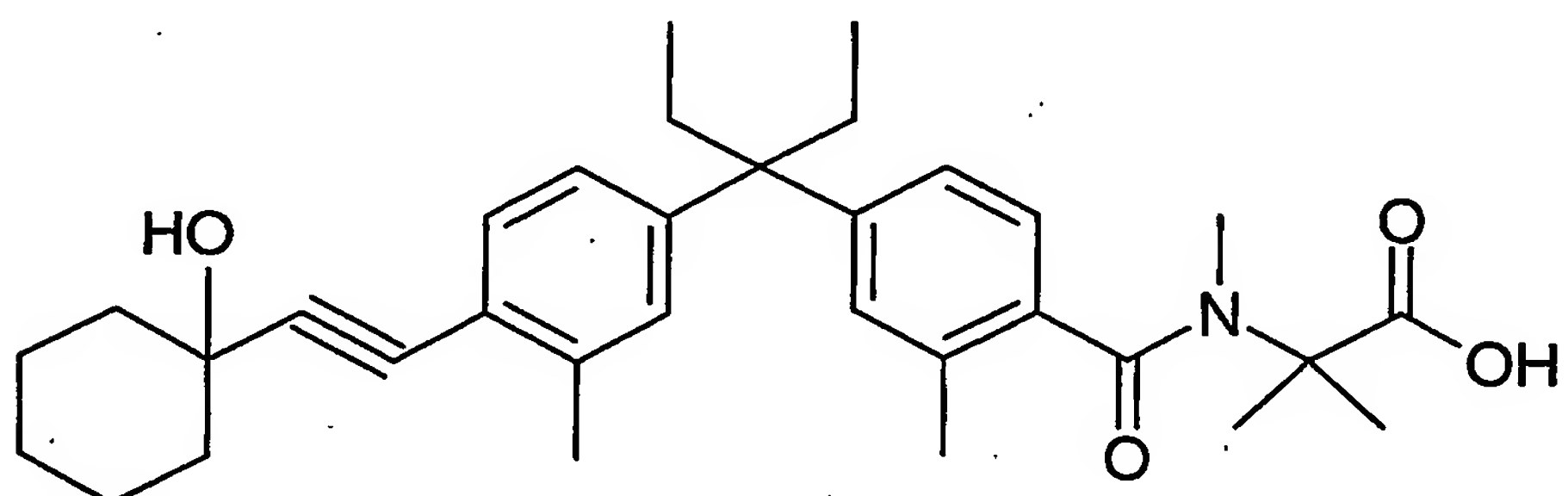


BB-12)

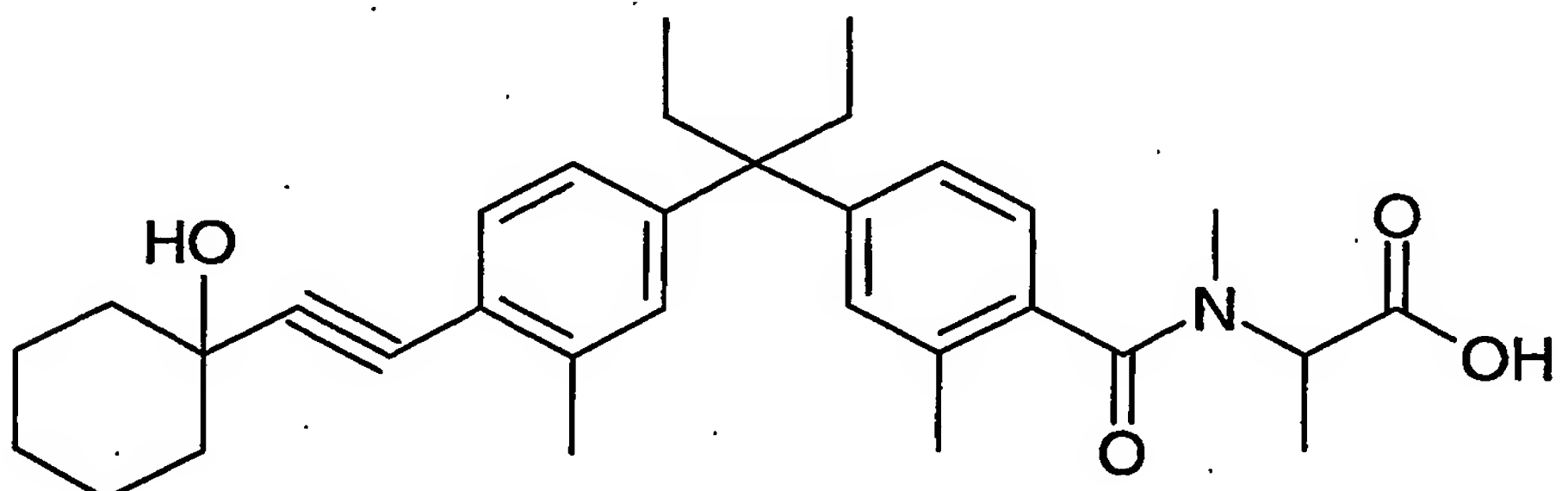
-143-



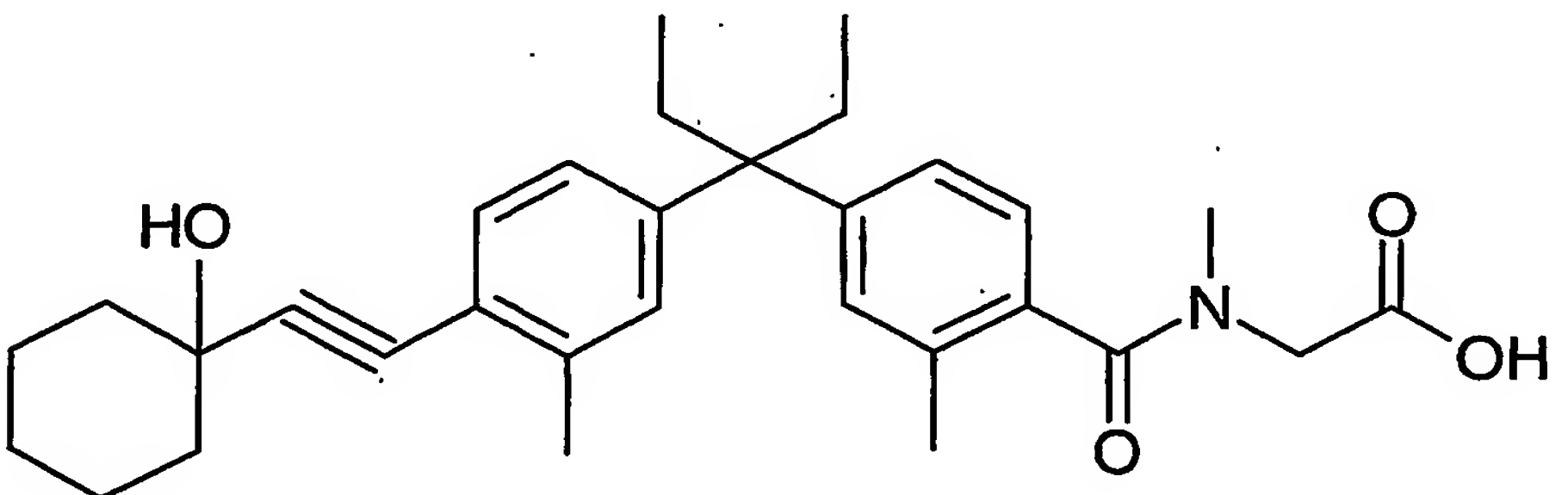
BB-13)



BB-14)

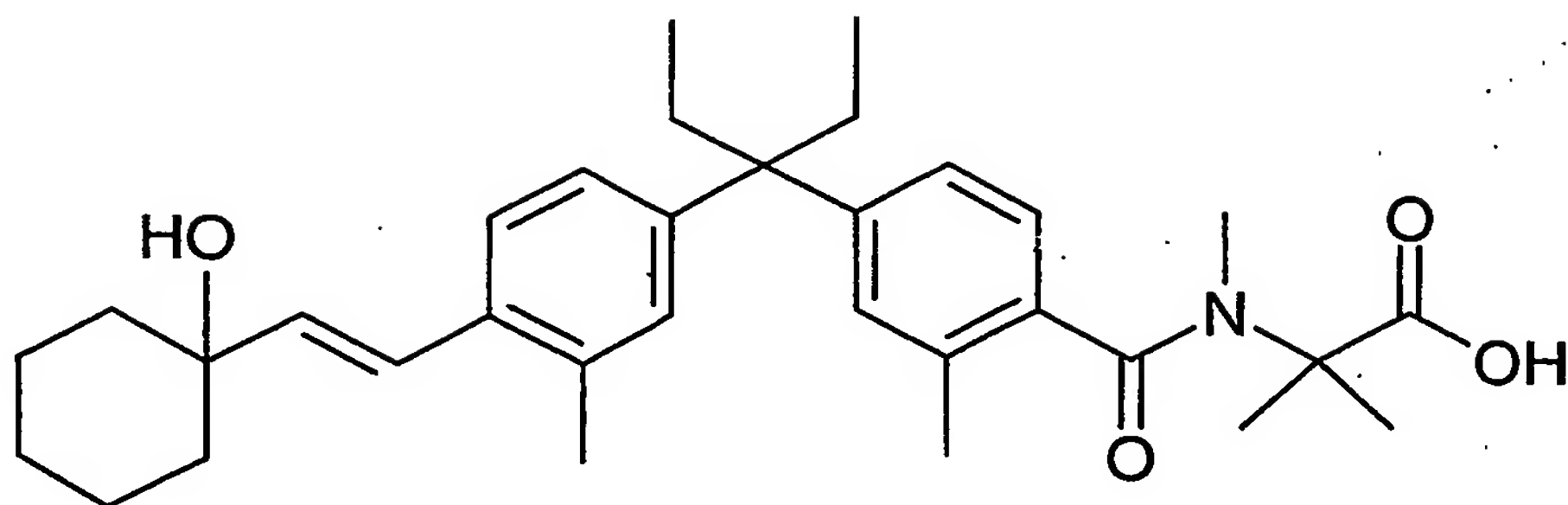


BB-15)

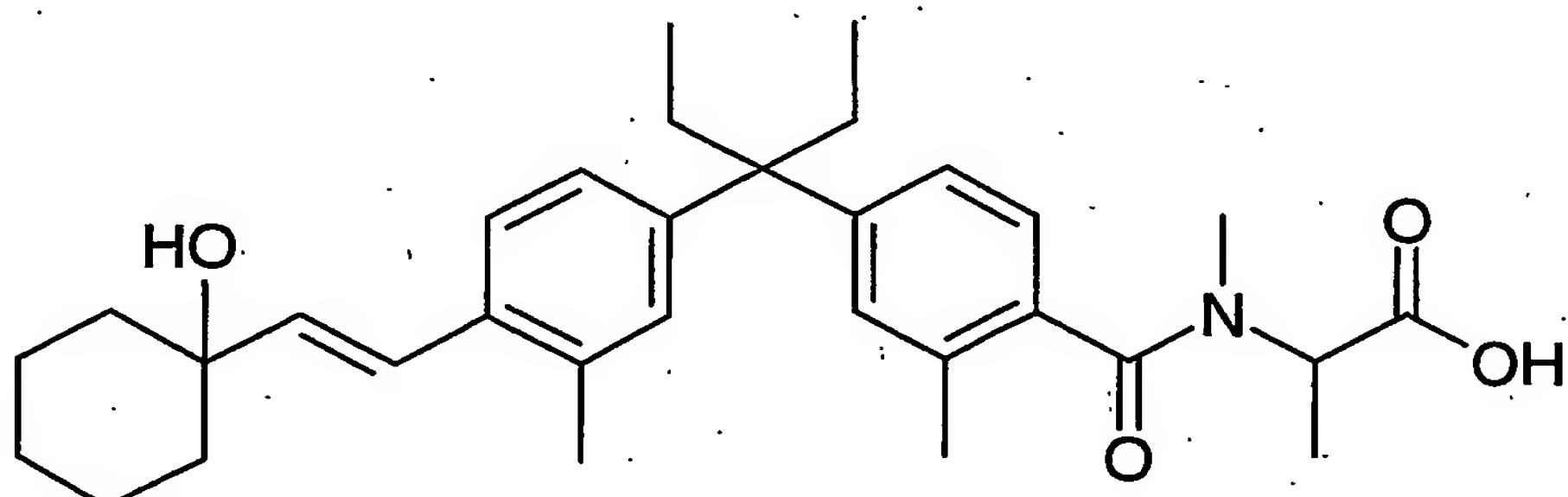


BB-16)

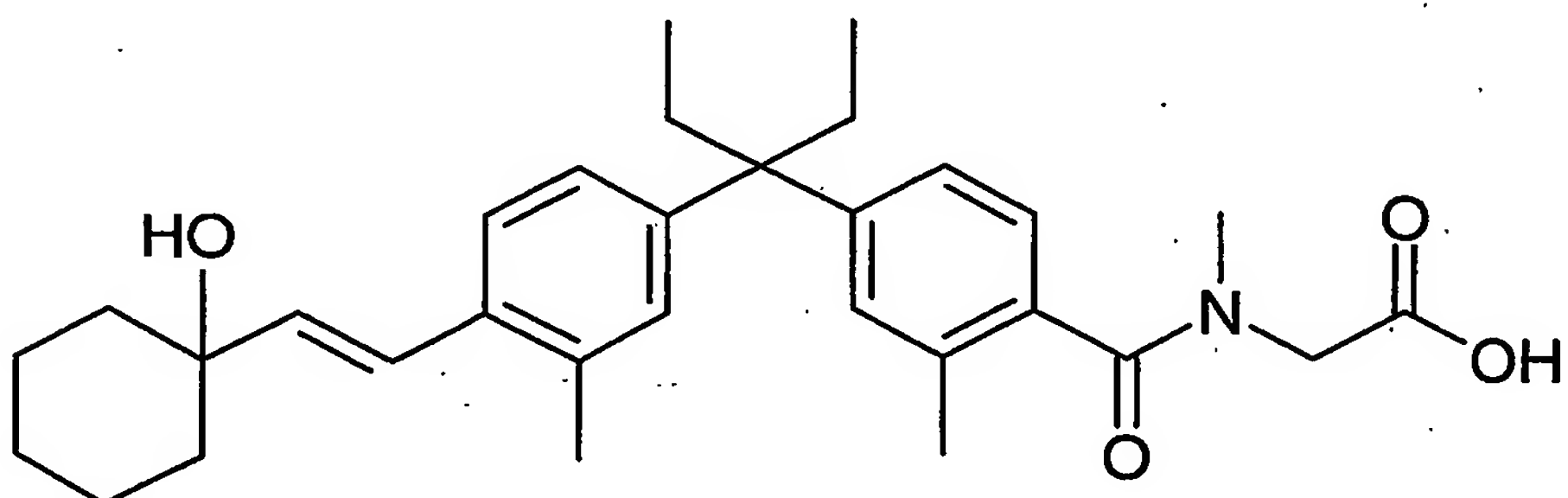
-144-



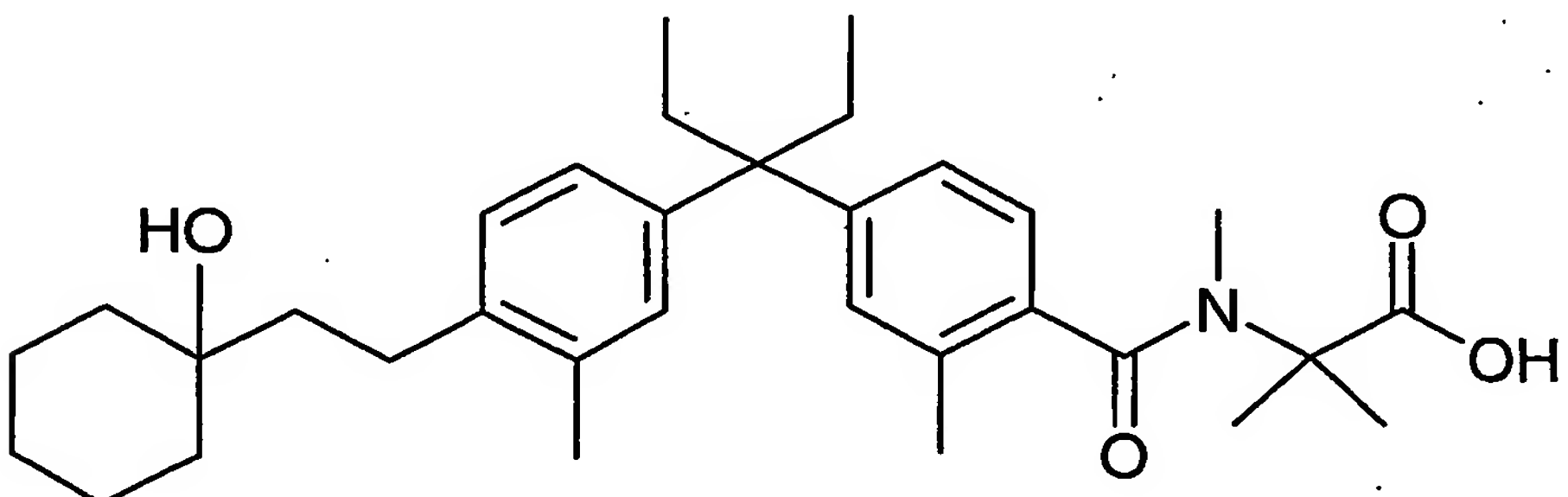
BB-17)



BB-18)

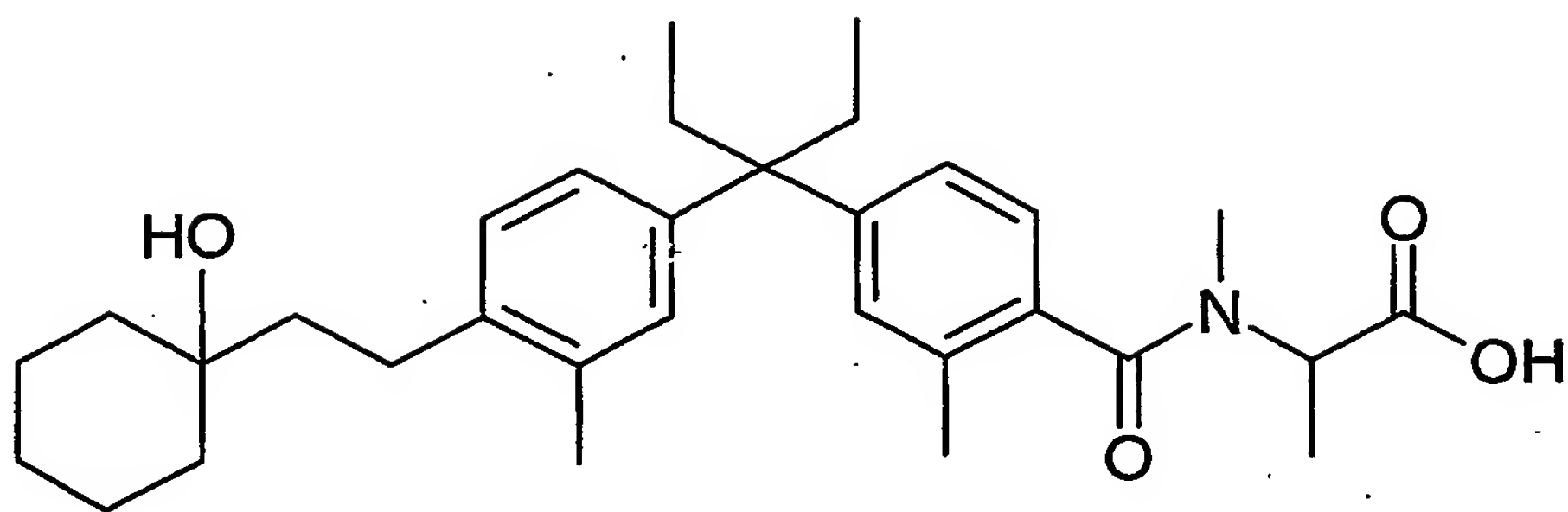


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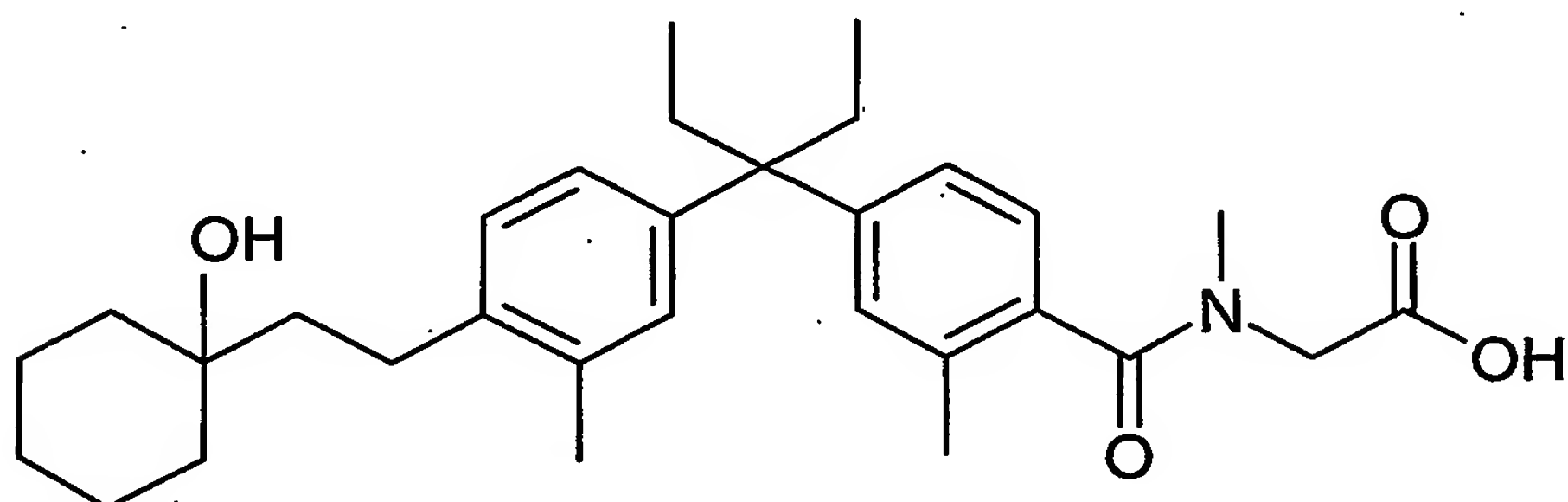


BB-20)

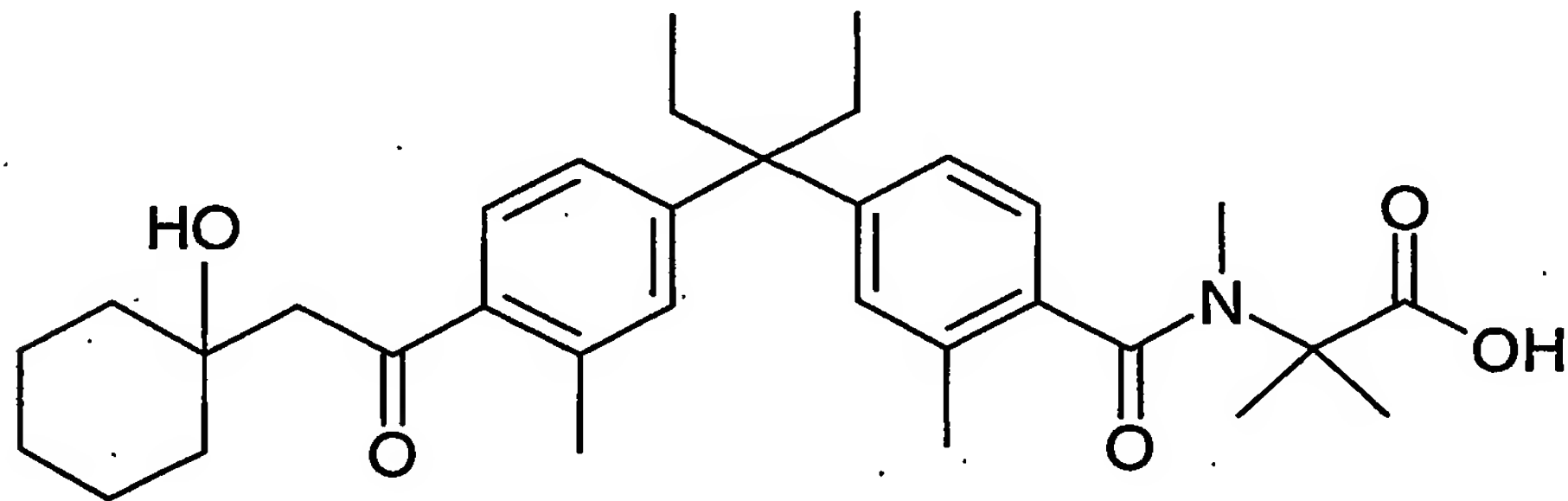
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BB-21)

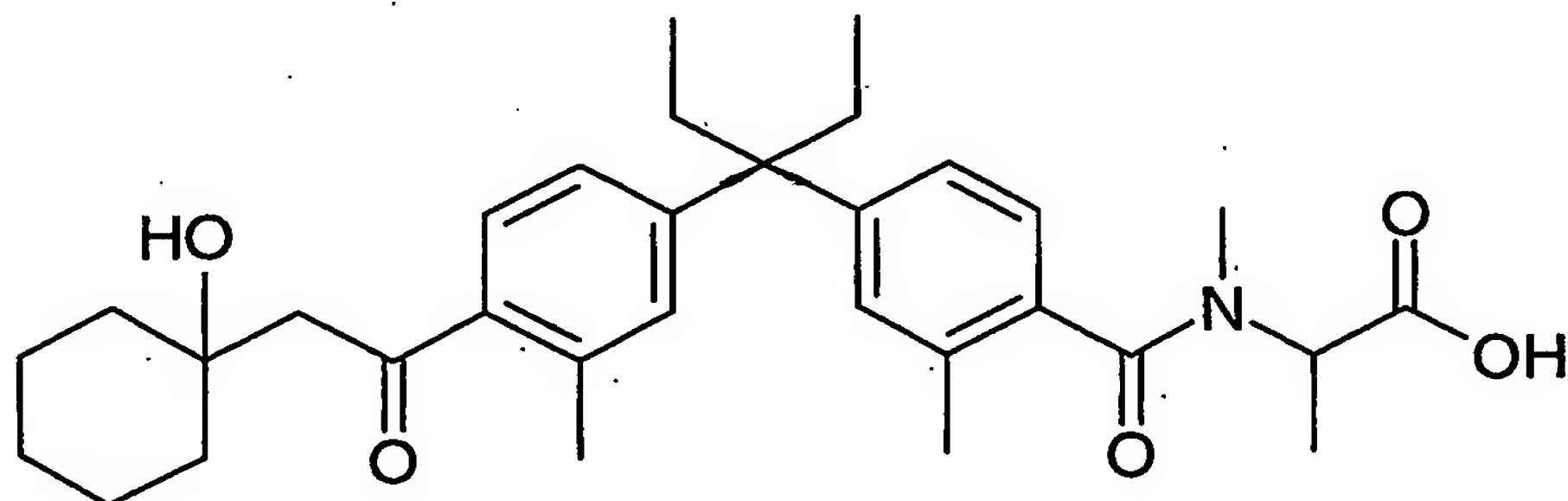


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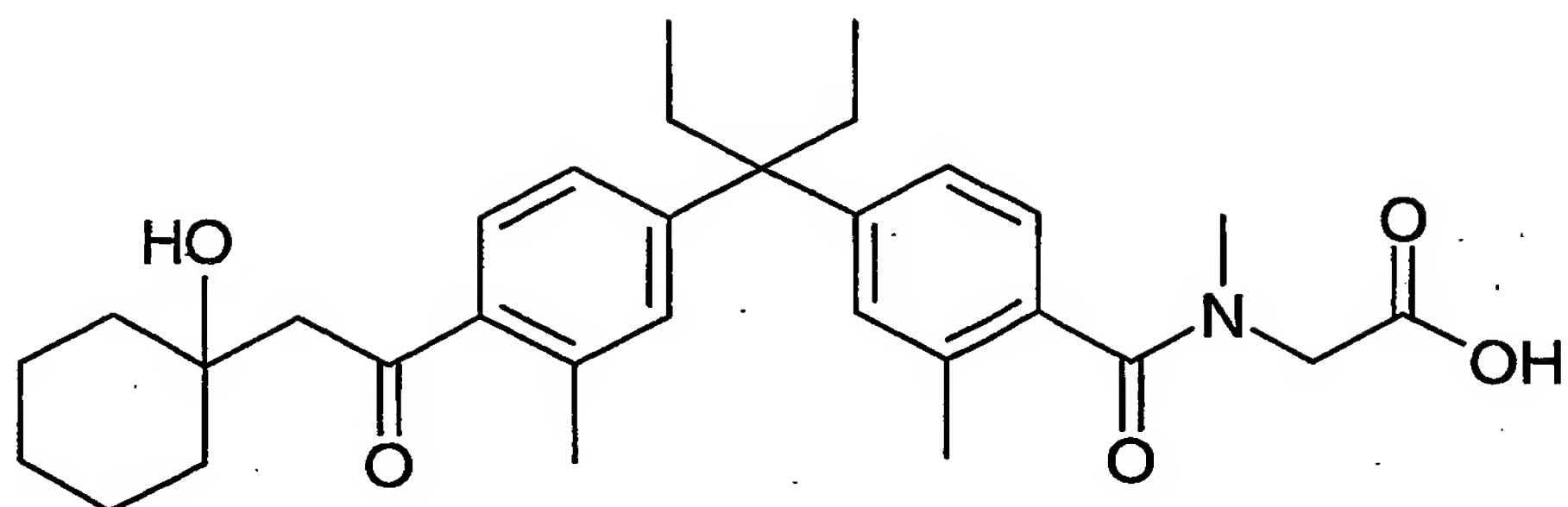
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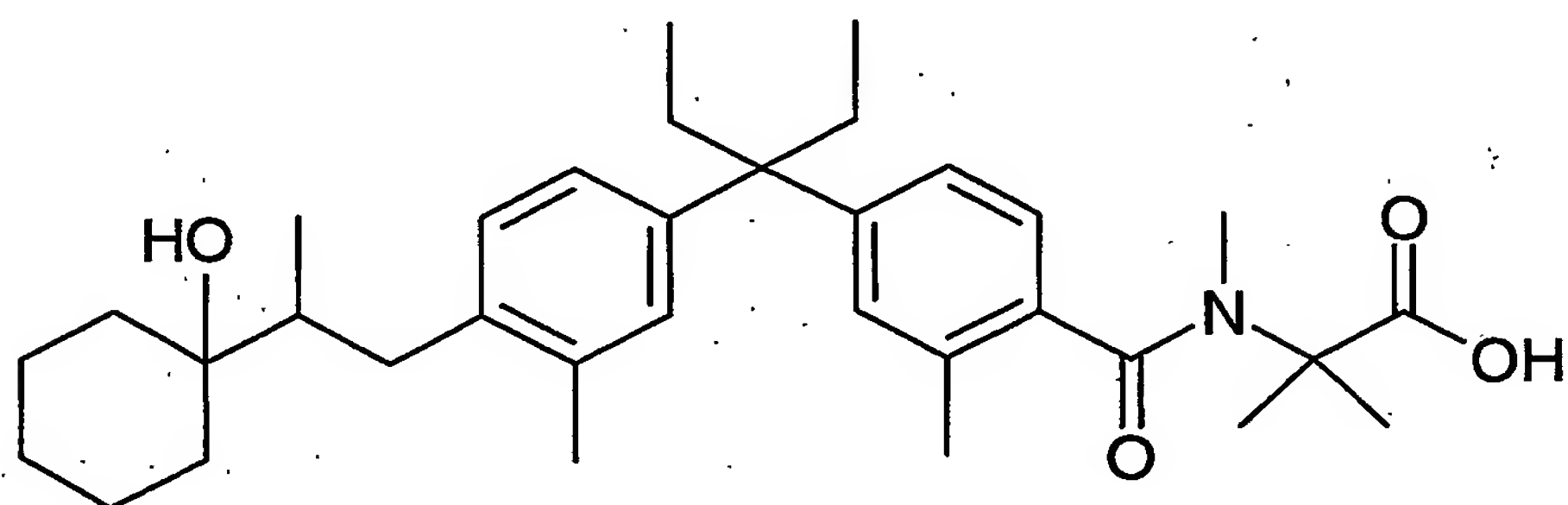


BB-24)

-146-

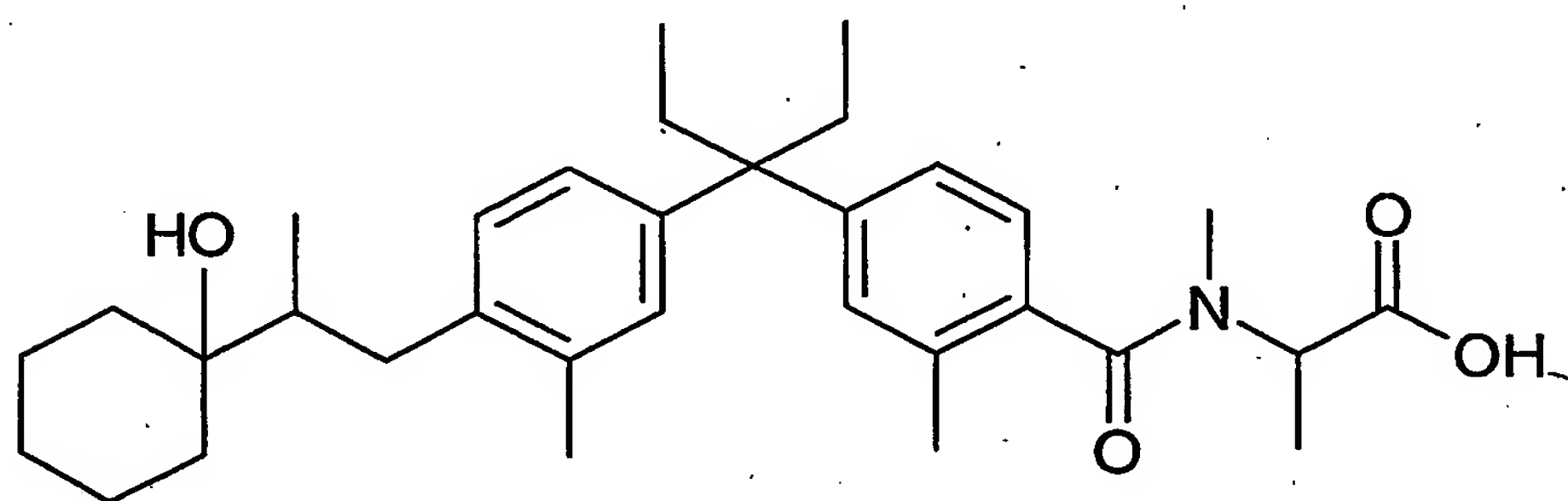


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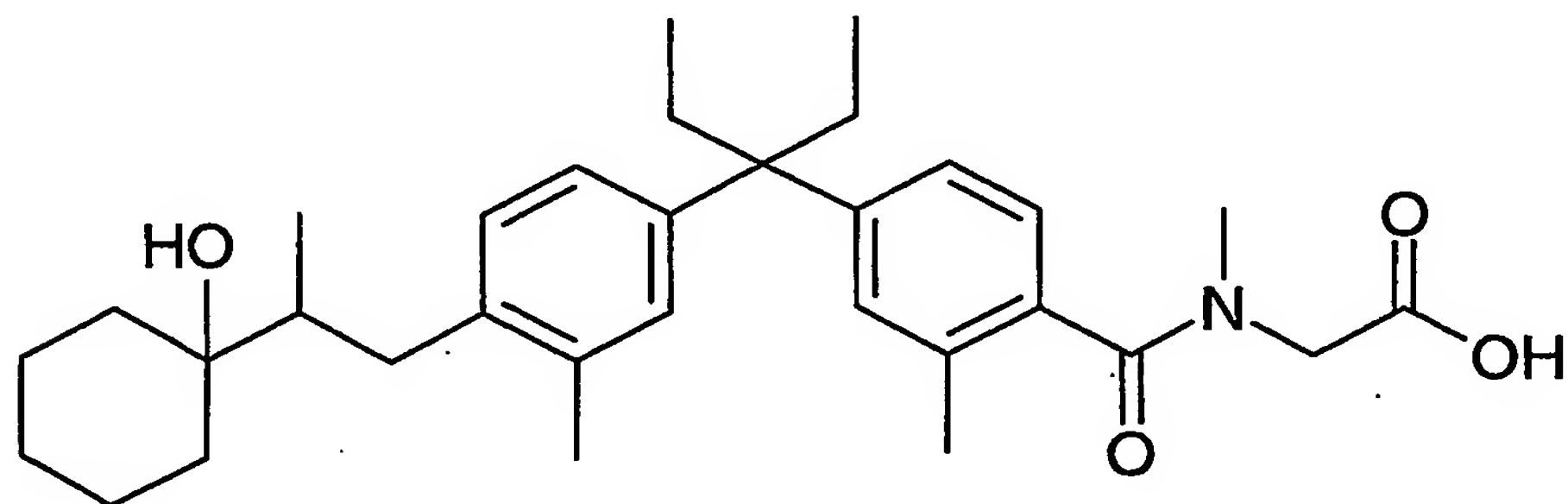


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BB-26)

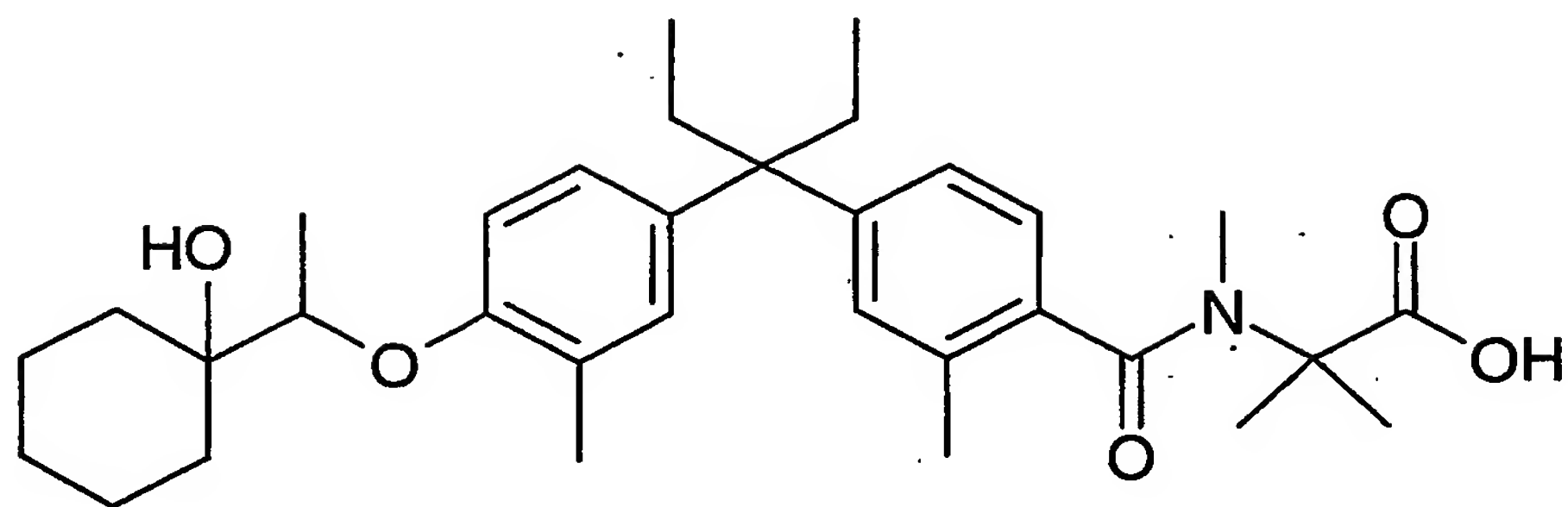


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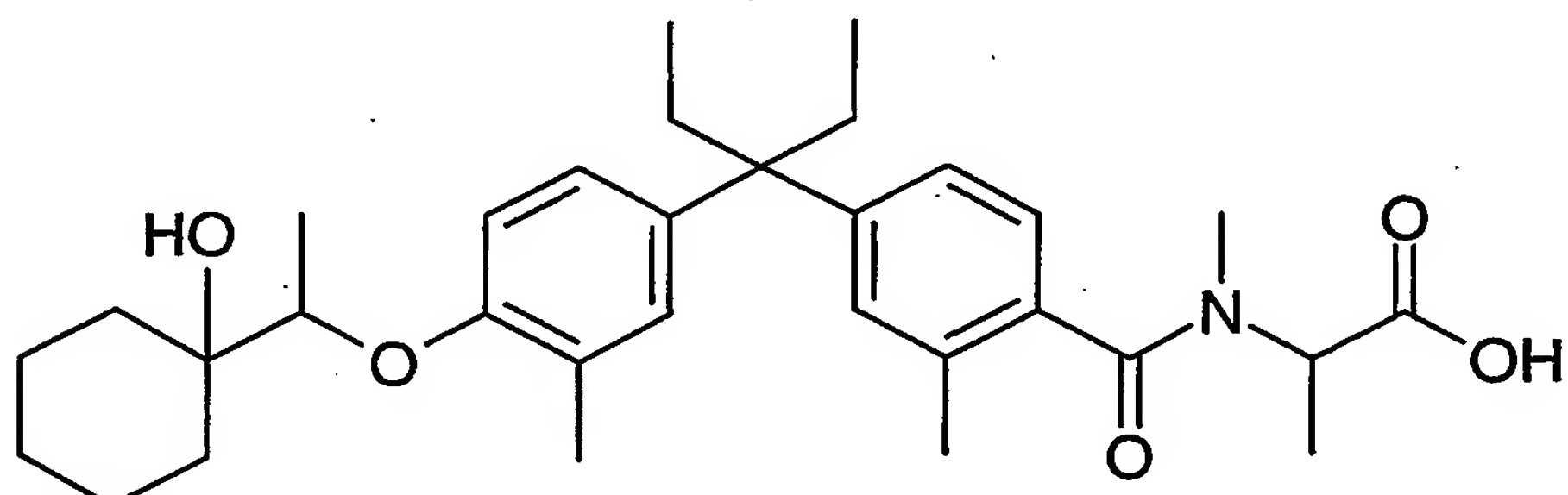


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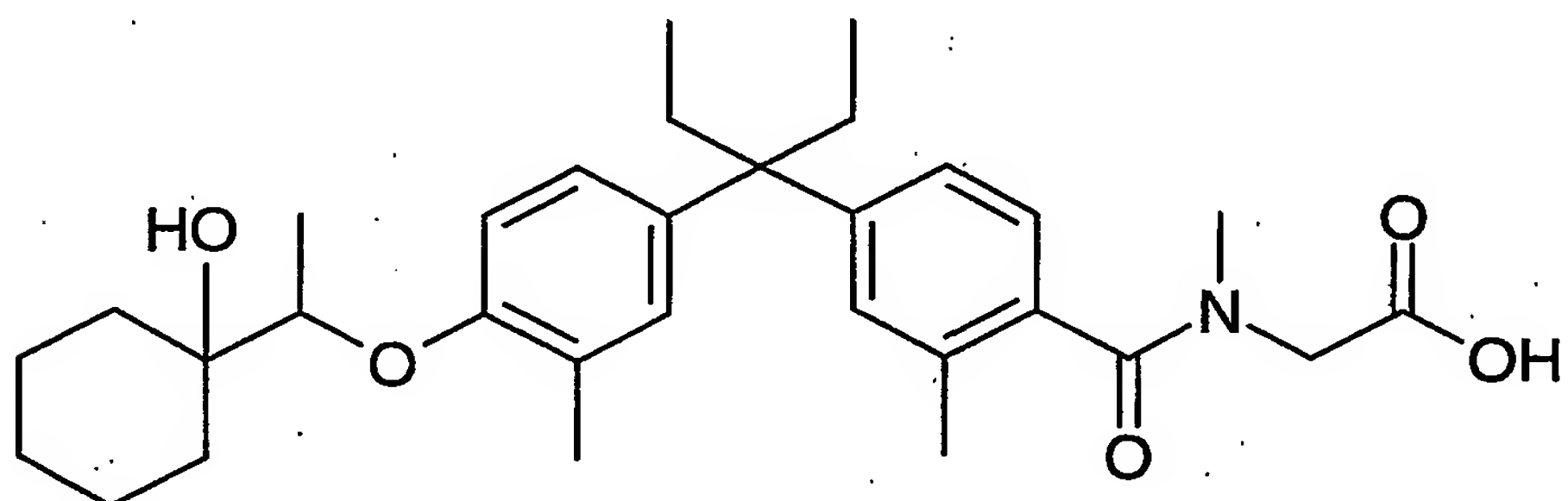
-147-



BB-29)

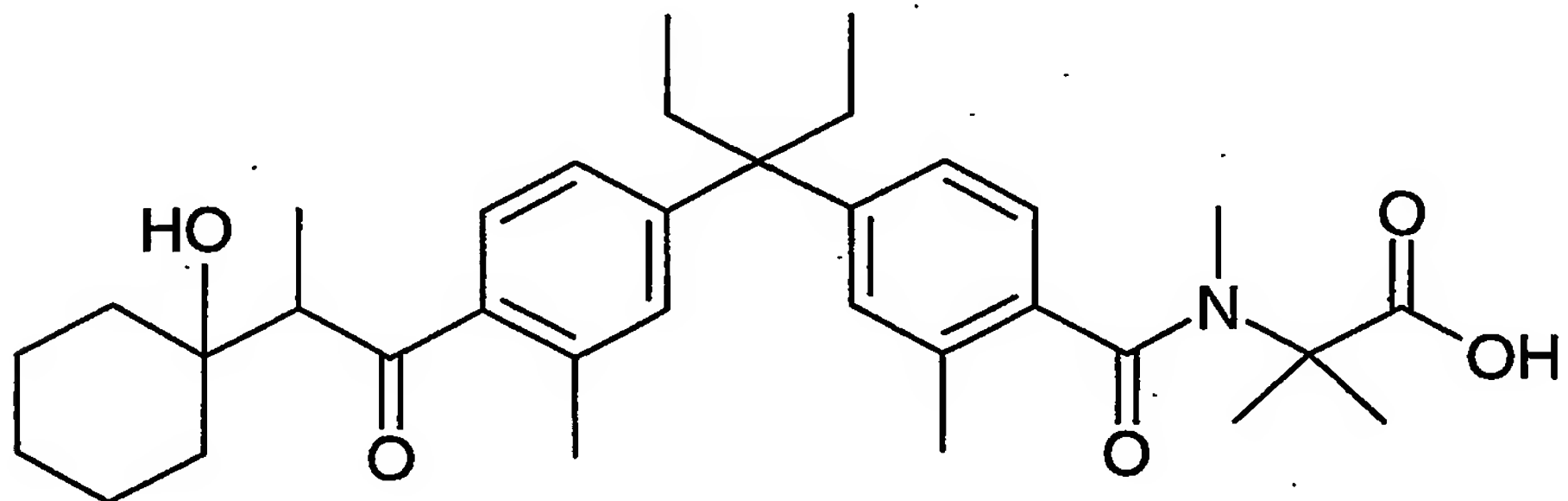


BB-30)



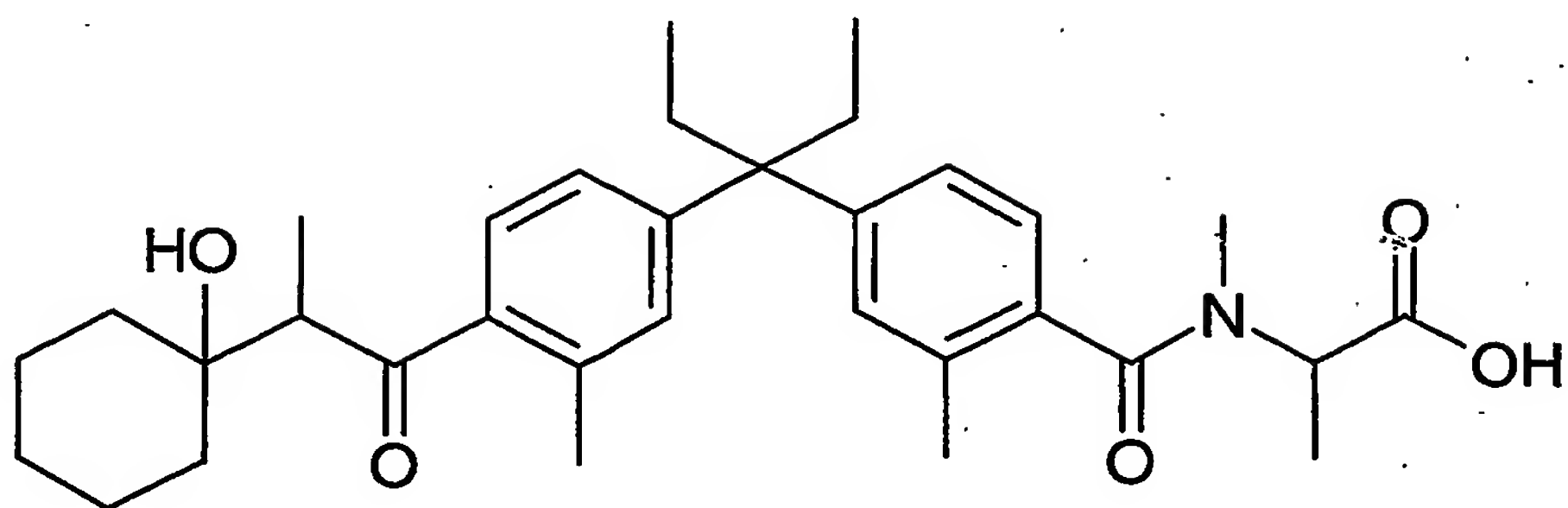
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BB-31)



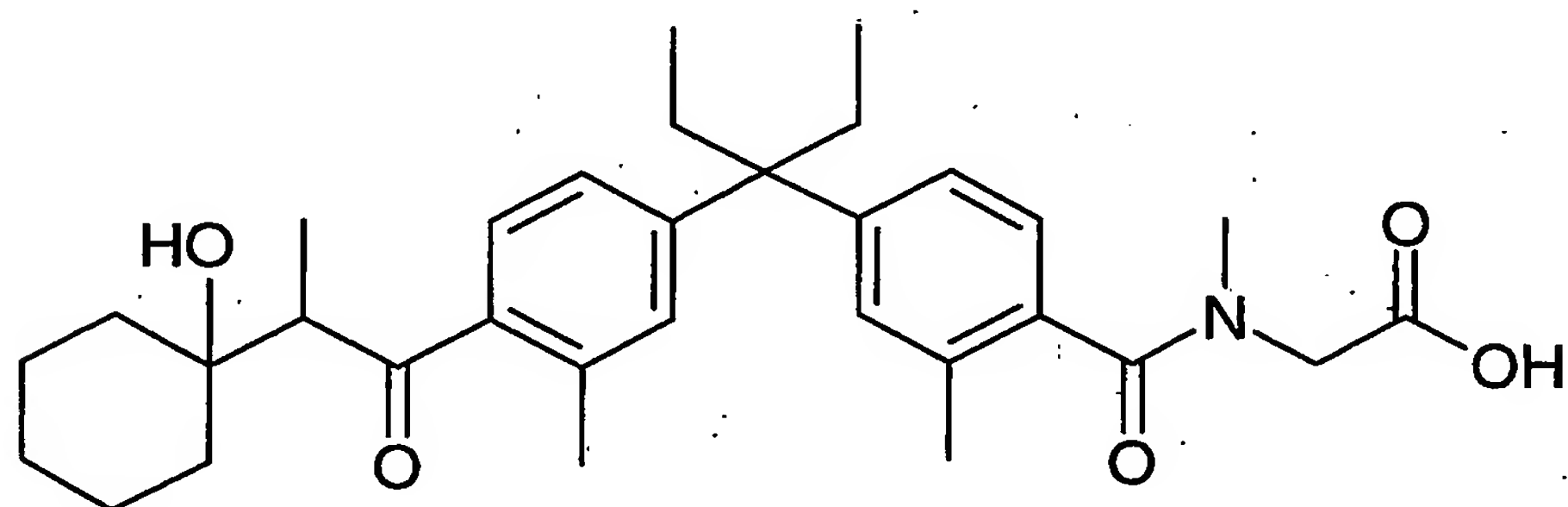
BB-32)

-148-



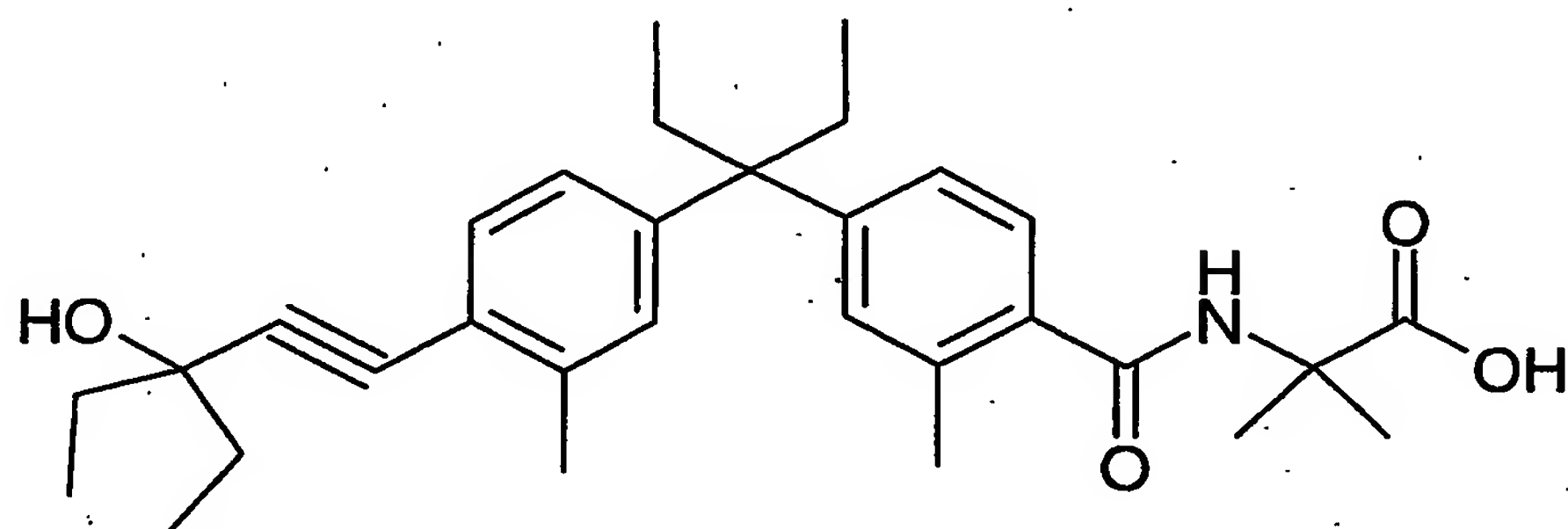
, or

BB-33)

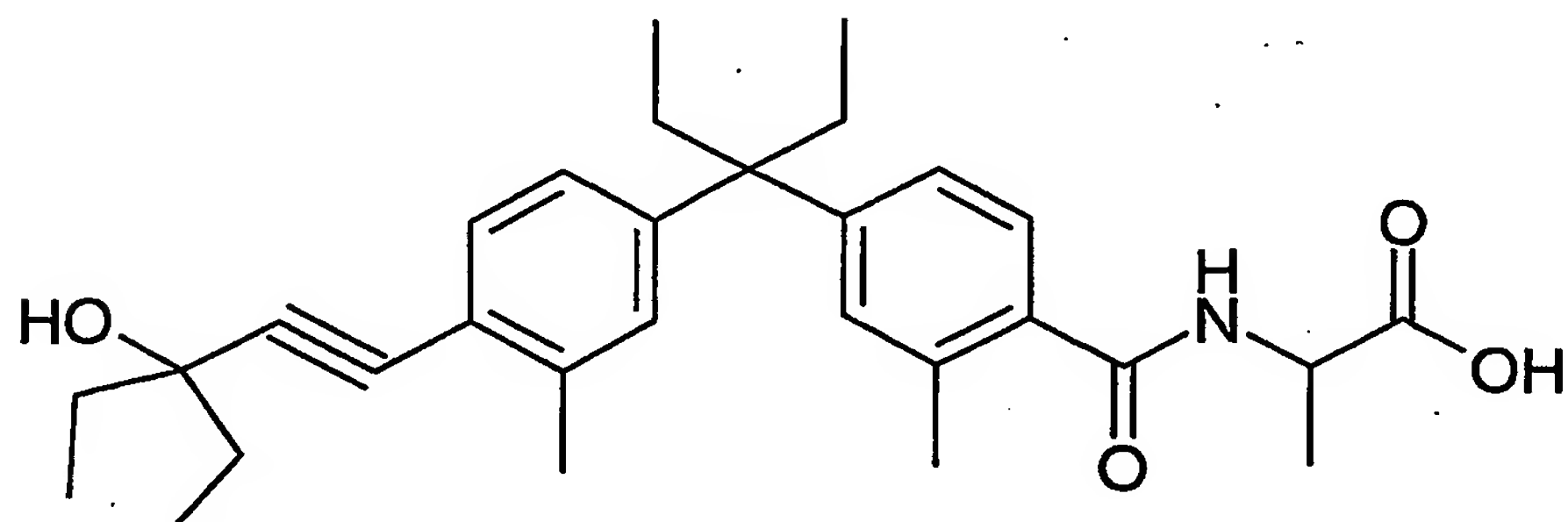


- 5 7. The compound represented by formula (CC-1) to (CC-44) or a pharmaceutically acceptable salt or prodrug derivative thereof:

CC-1)

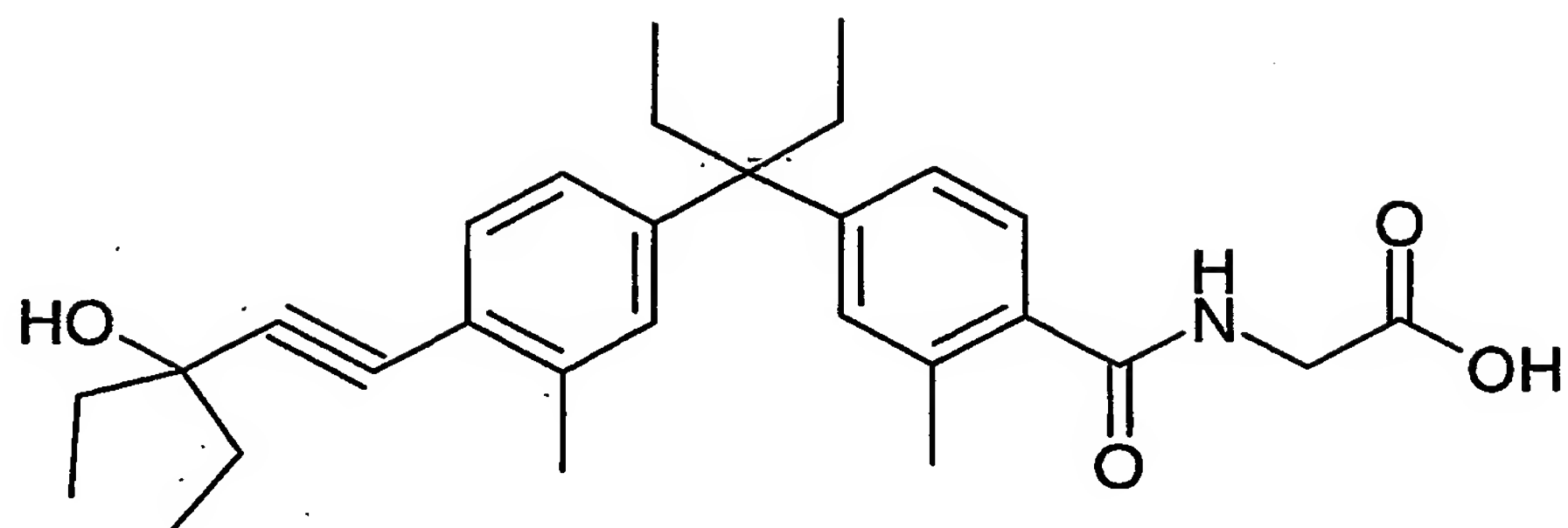


CC-2)

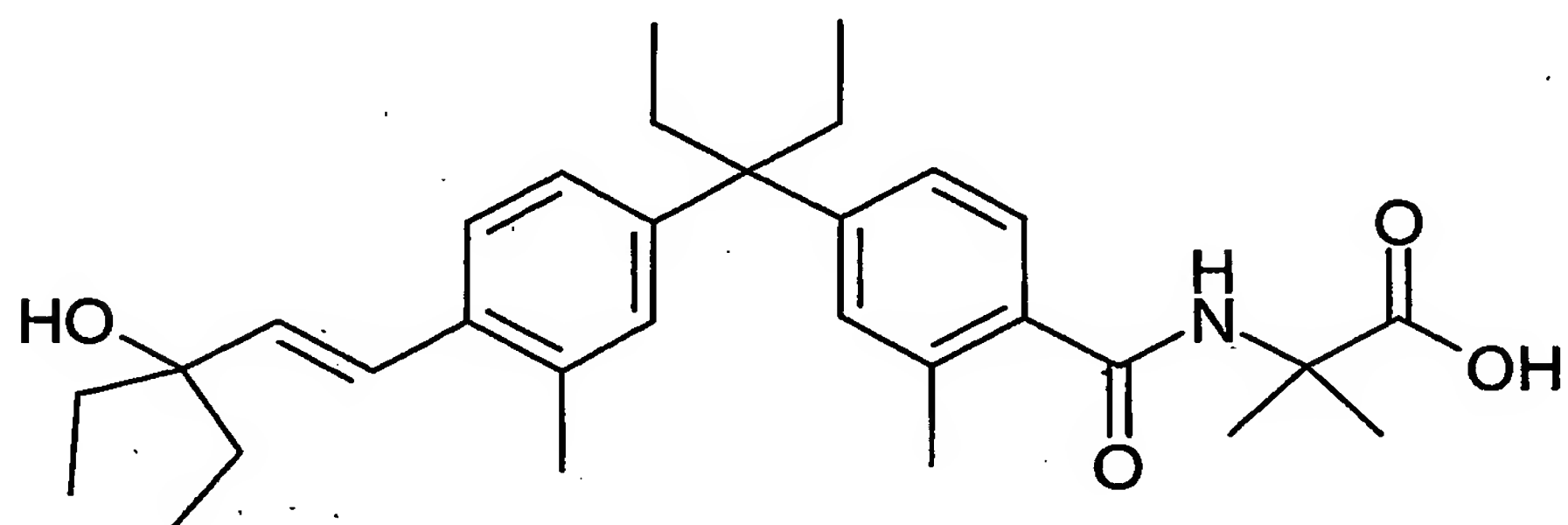


-149-

CC-3)

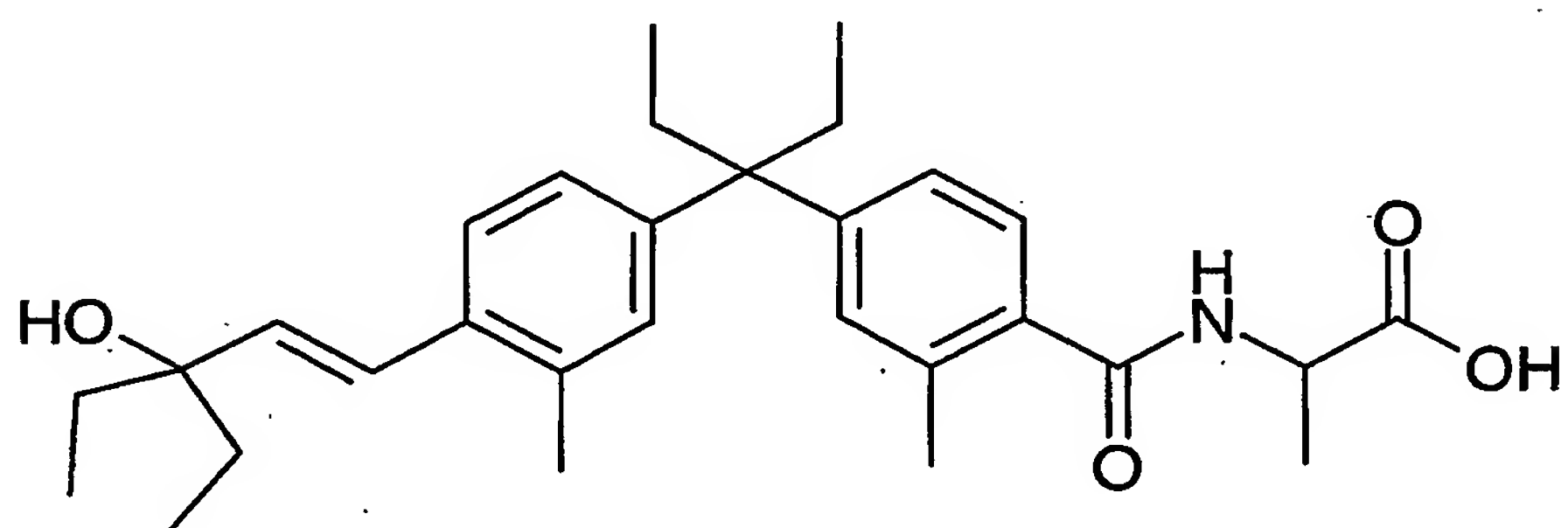


CC-4)

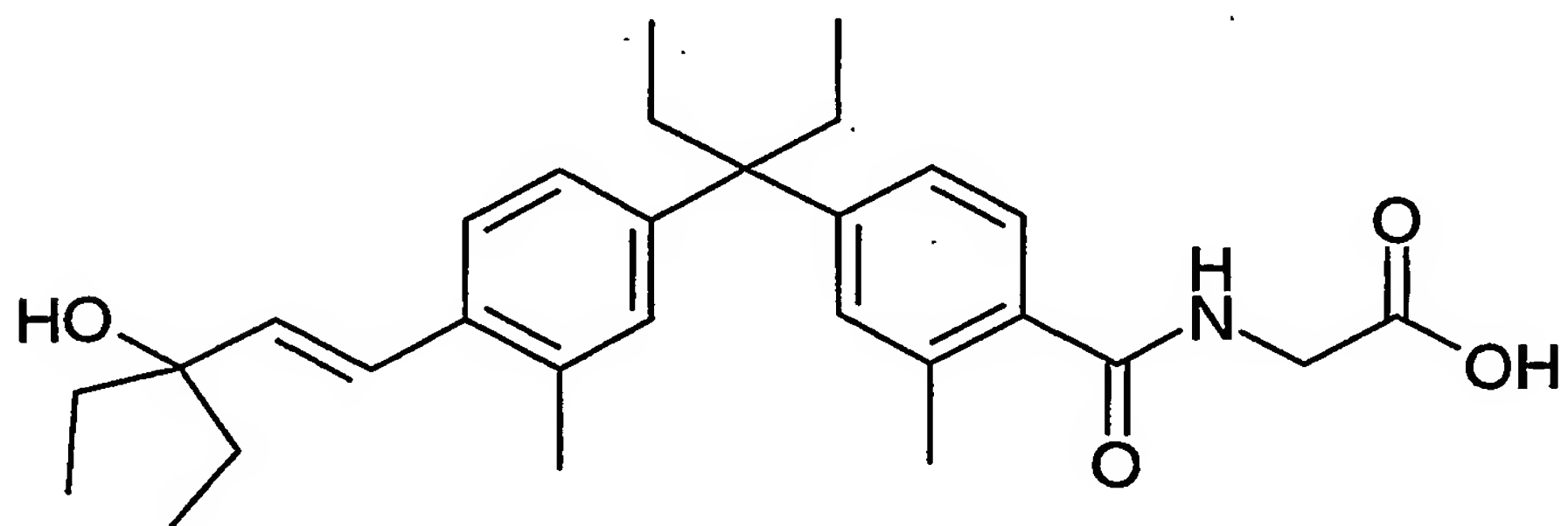


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CC-5)

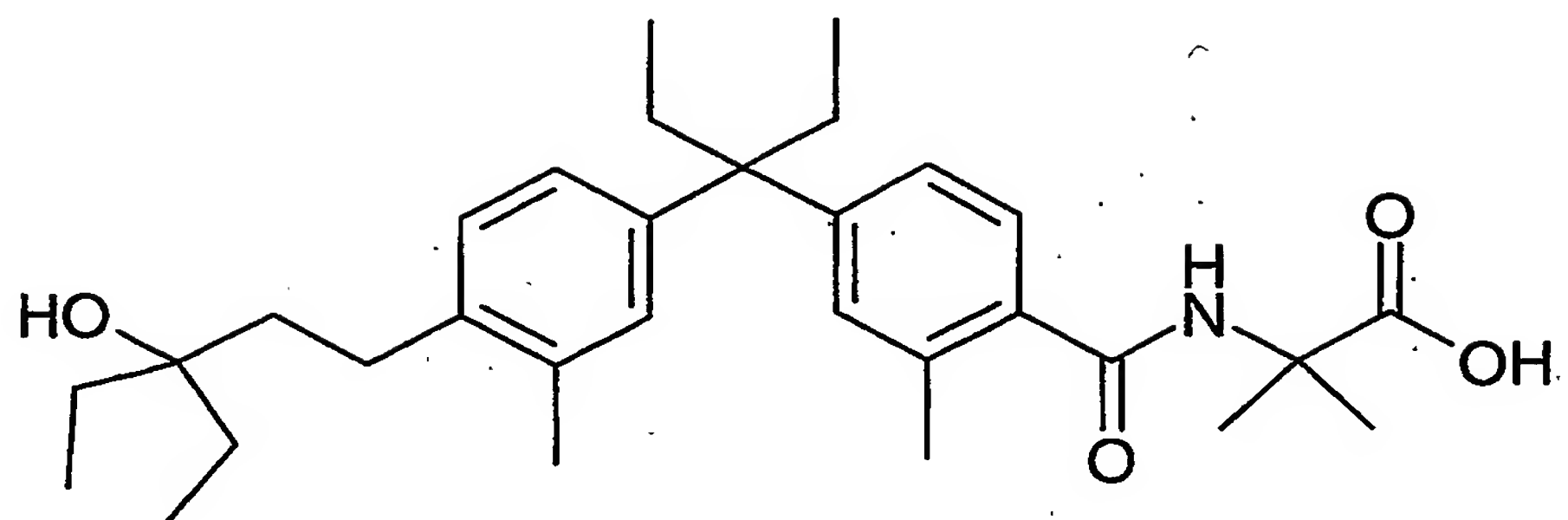


CC-6)

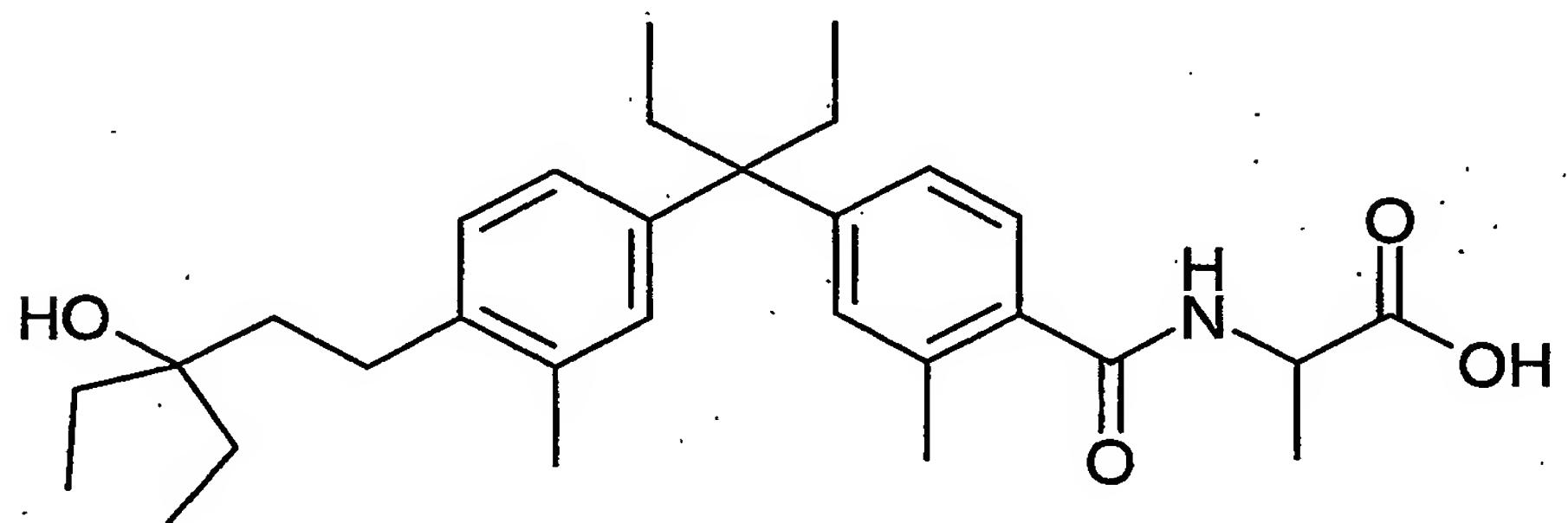


CC-7)

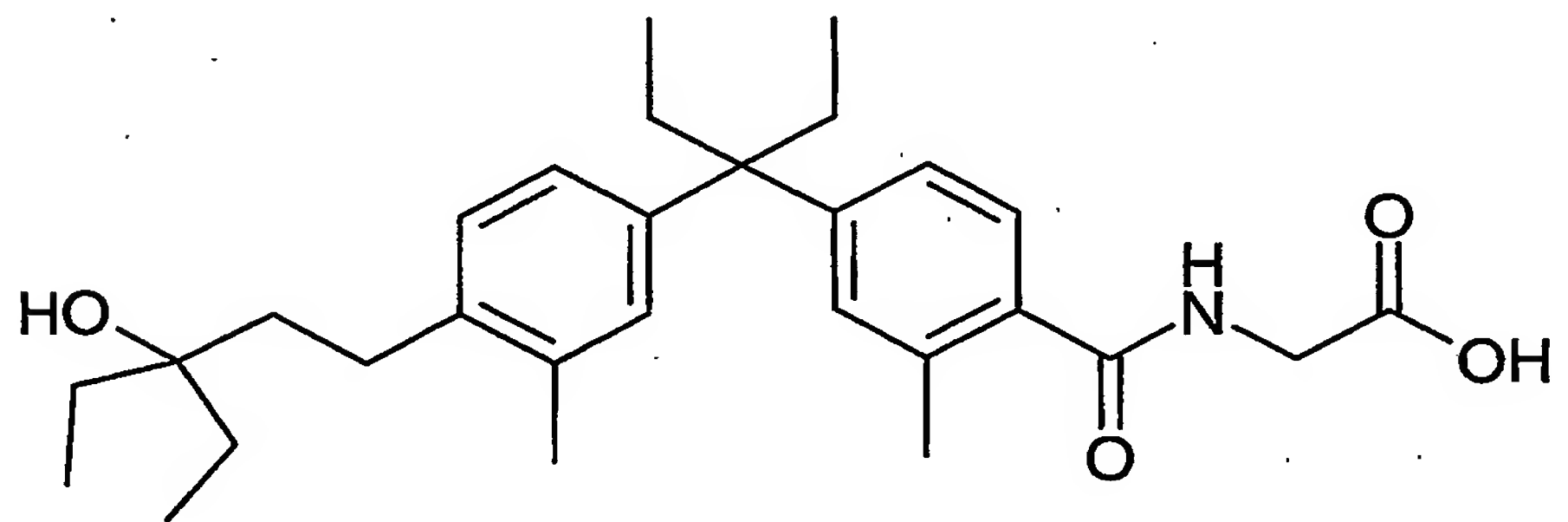
-150-



CC-8)

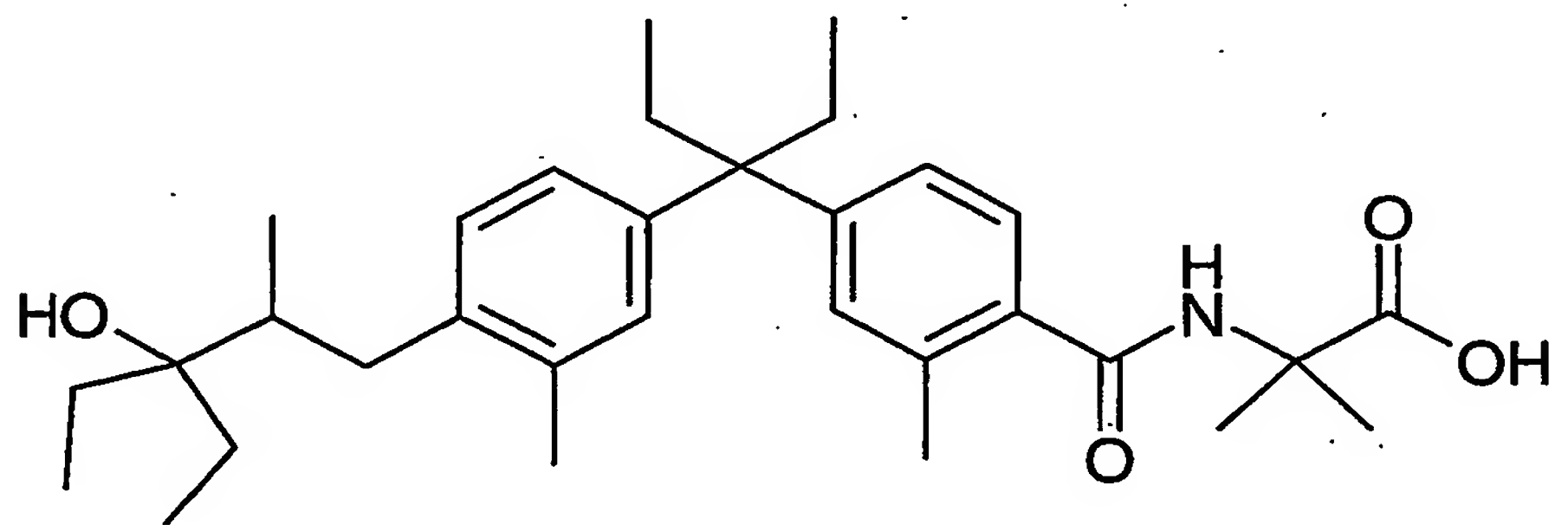


CC-9)



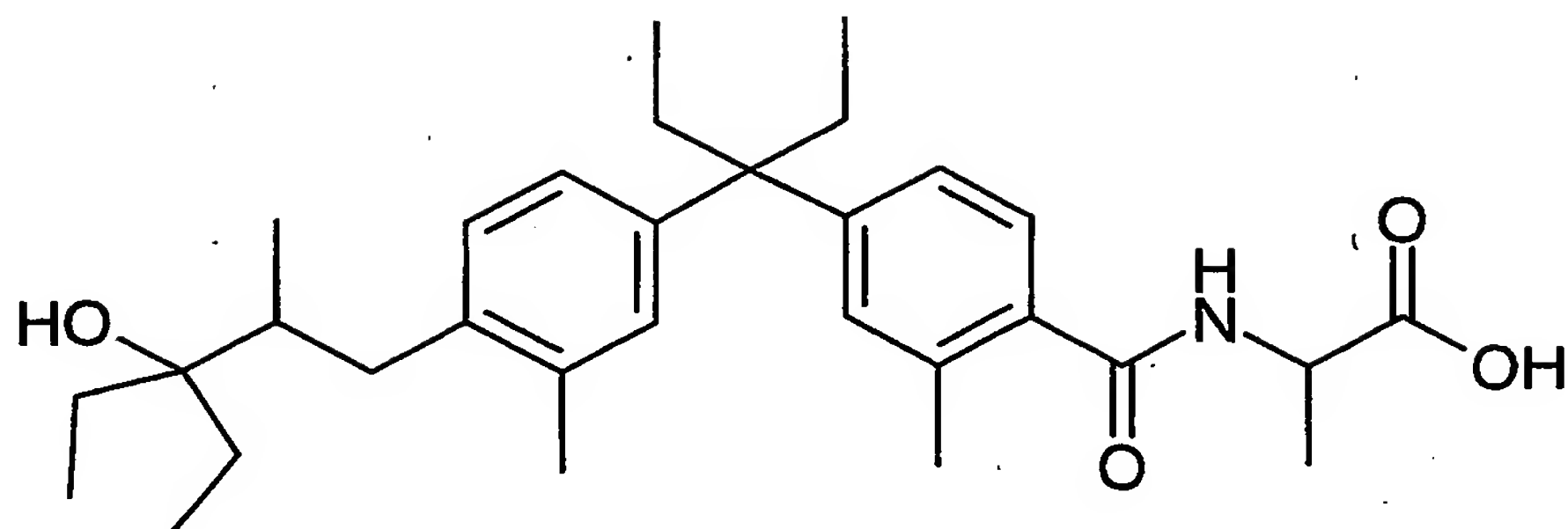
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CC-10)

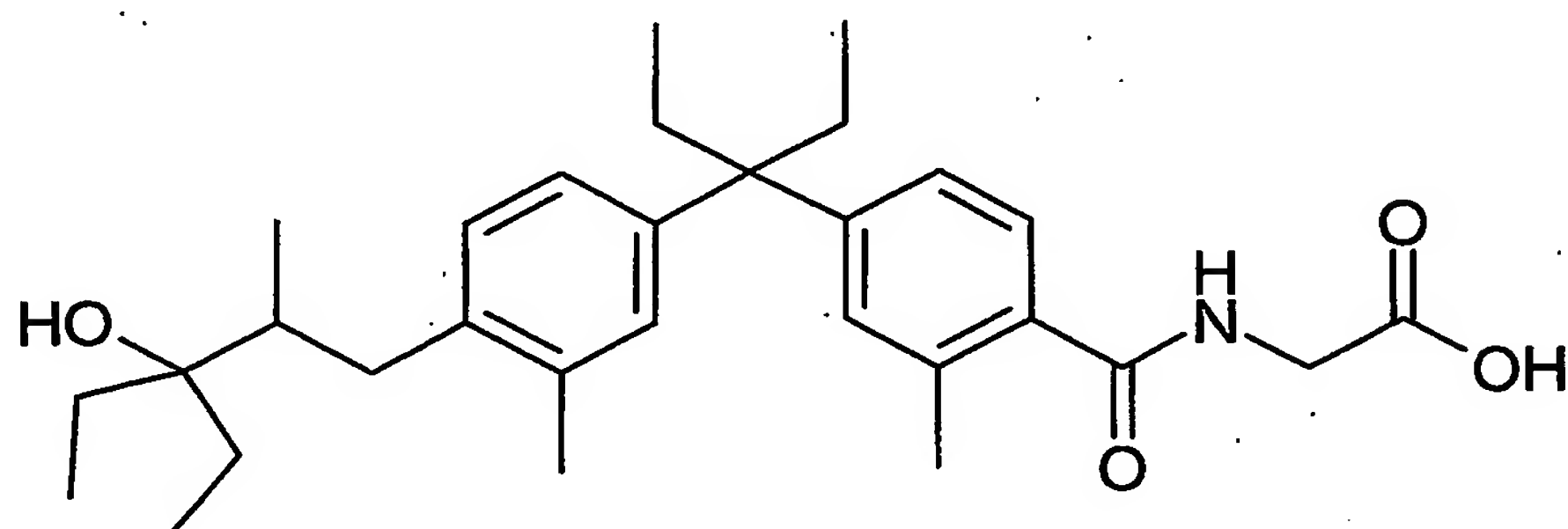


CC-11)

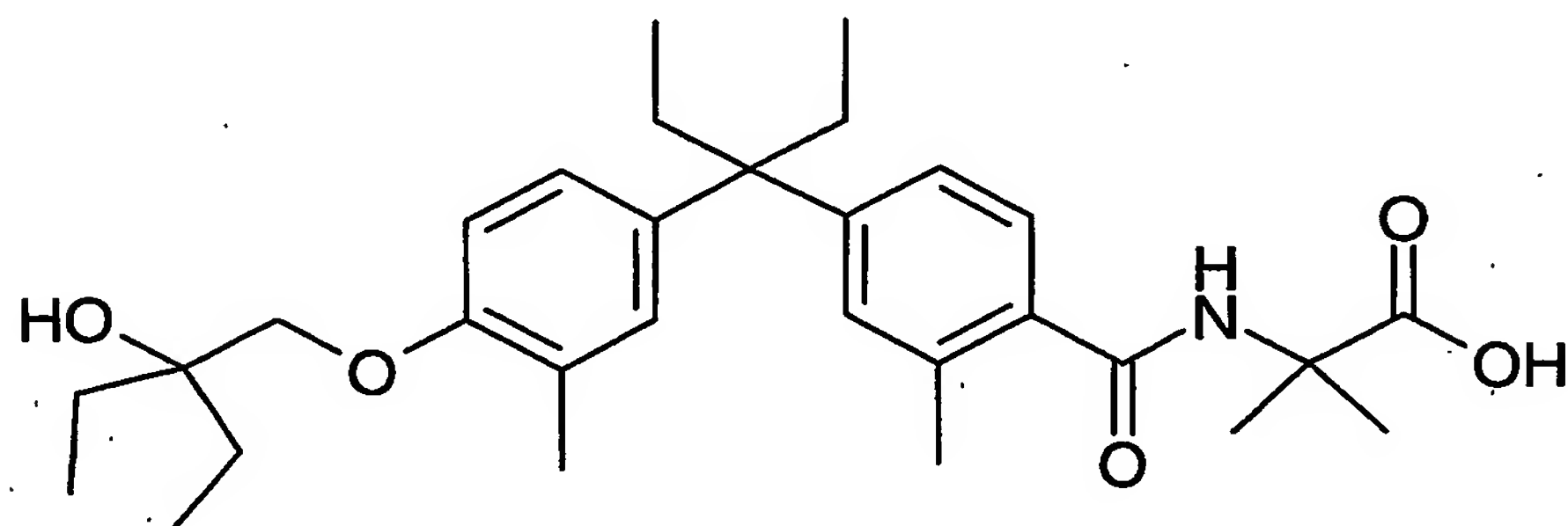
-151-



CC-12)

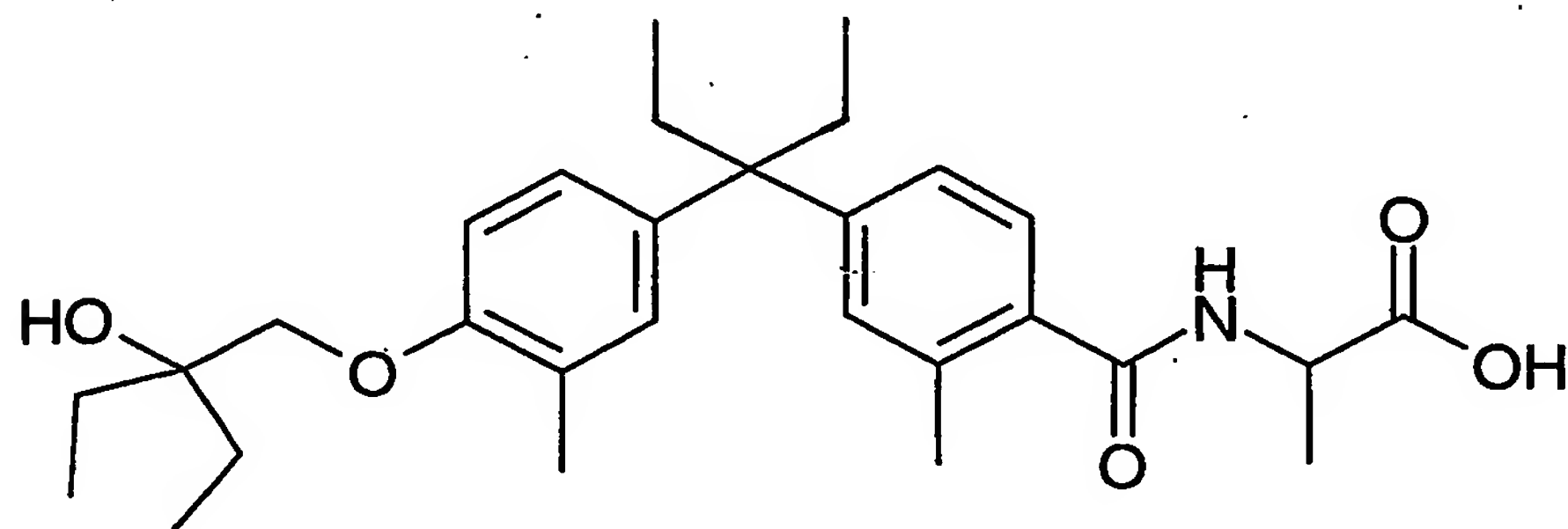


CC-13)



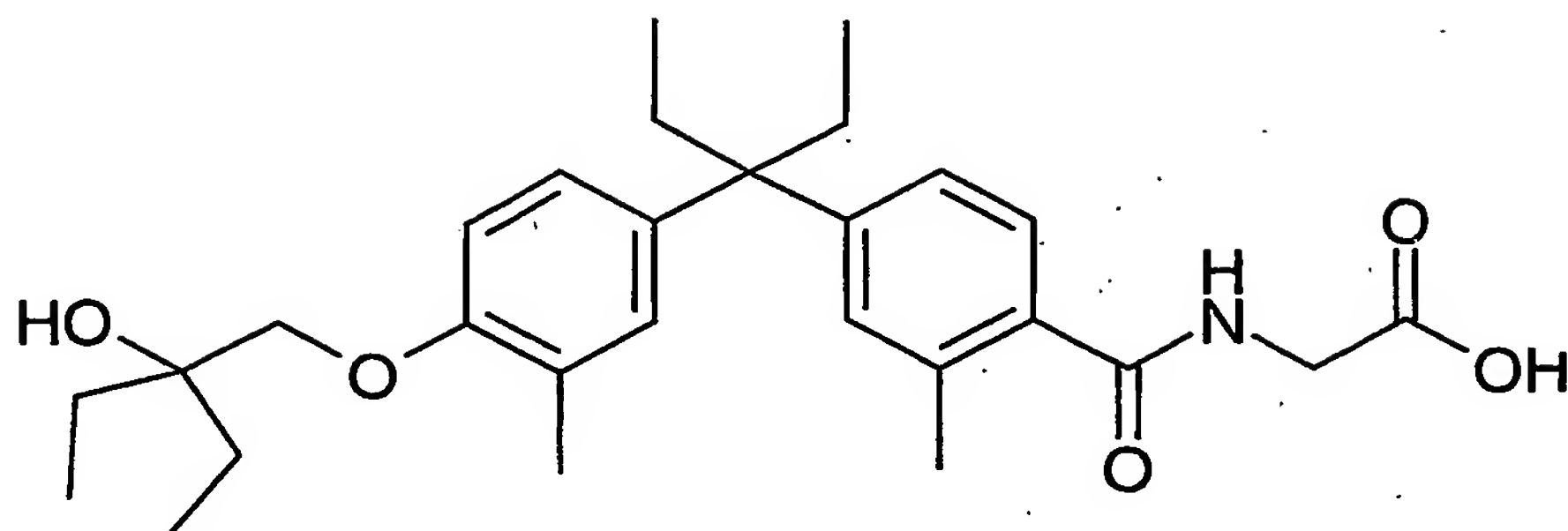
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CC-14)

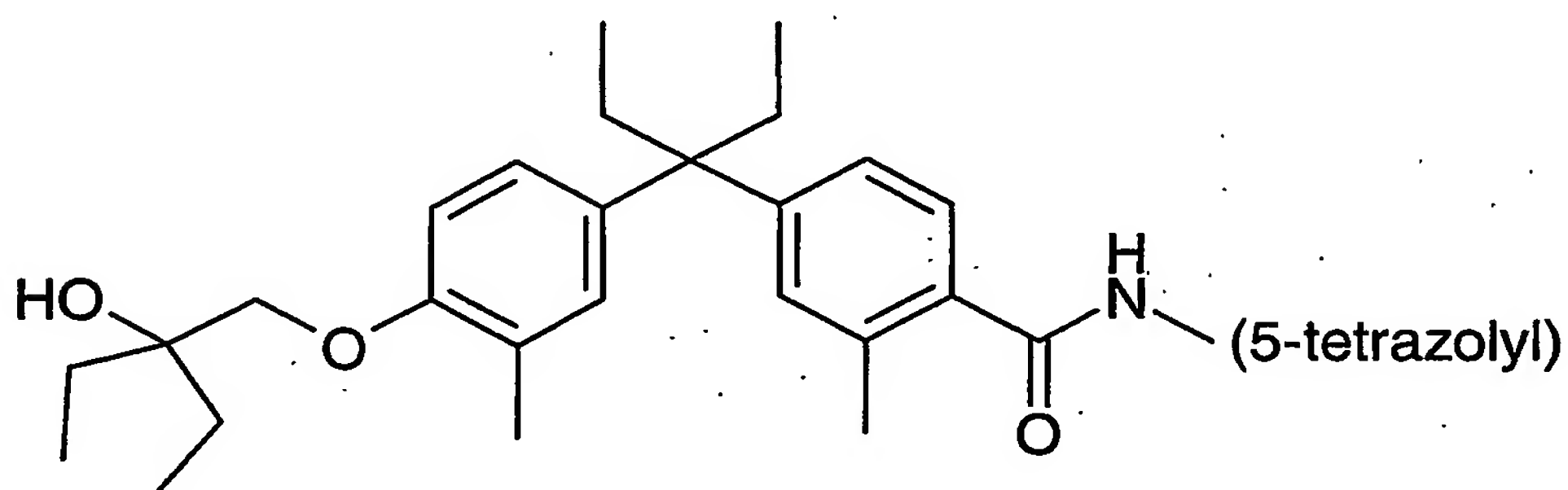


CC-15)

-152-

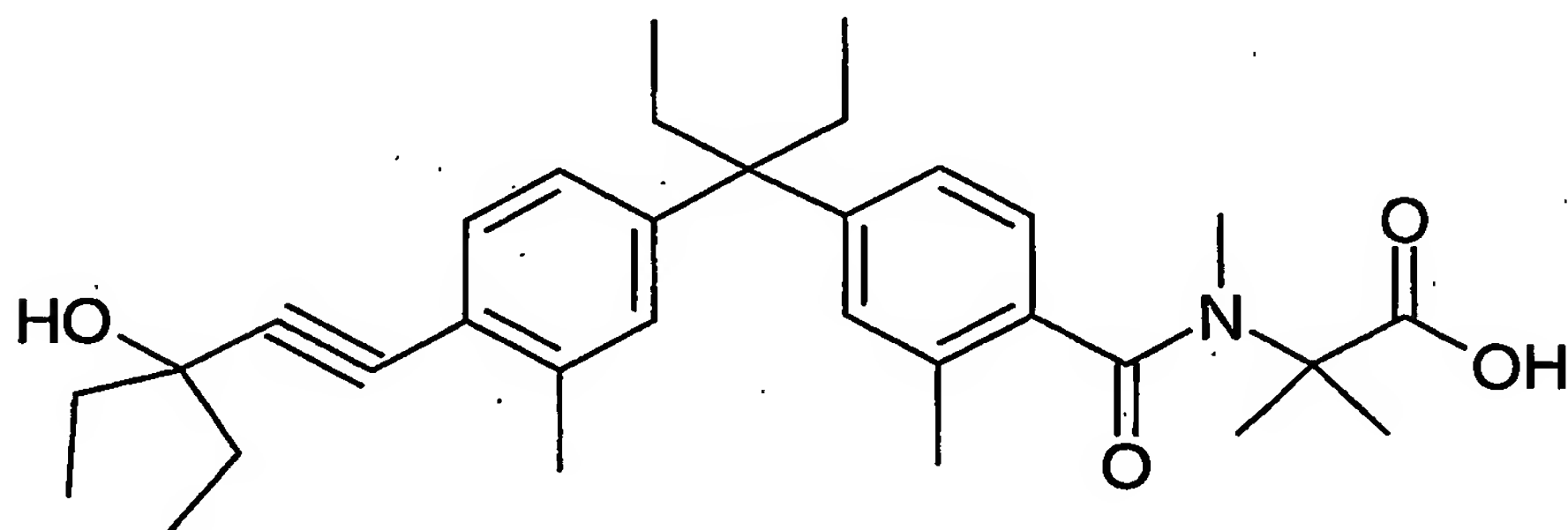


CC-16)

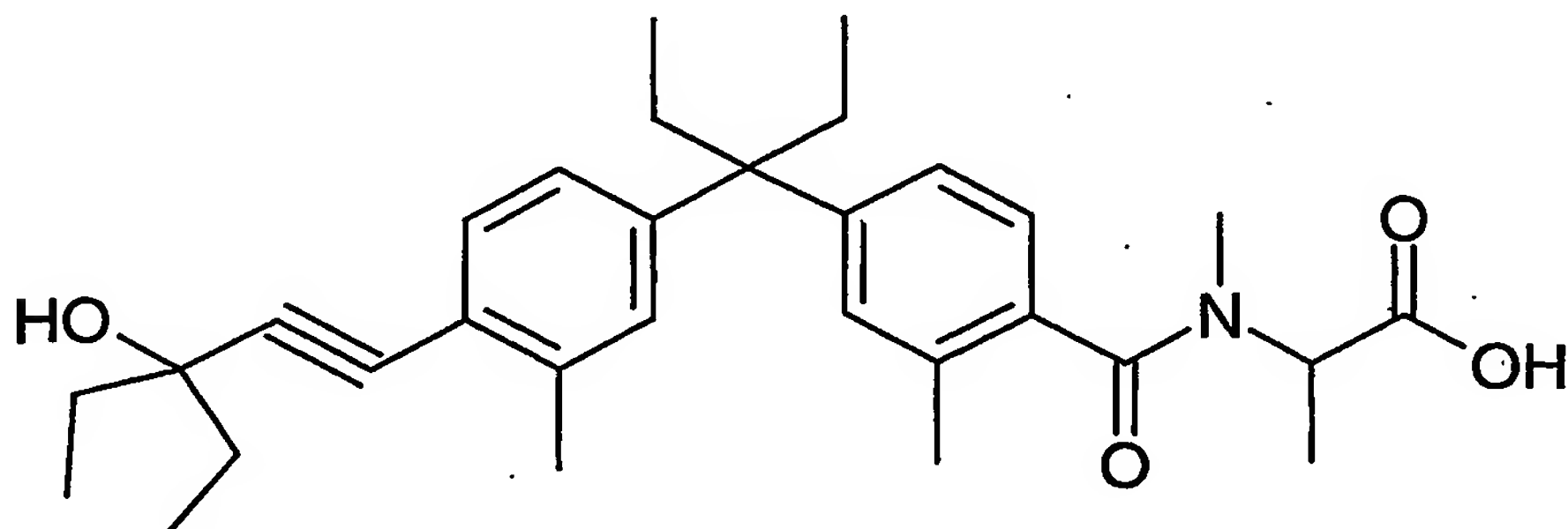


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CC-17)

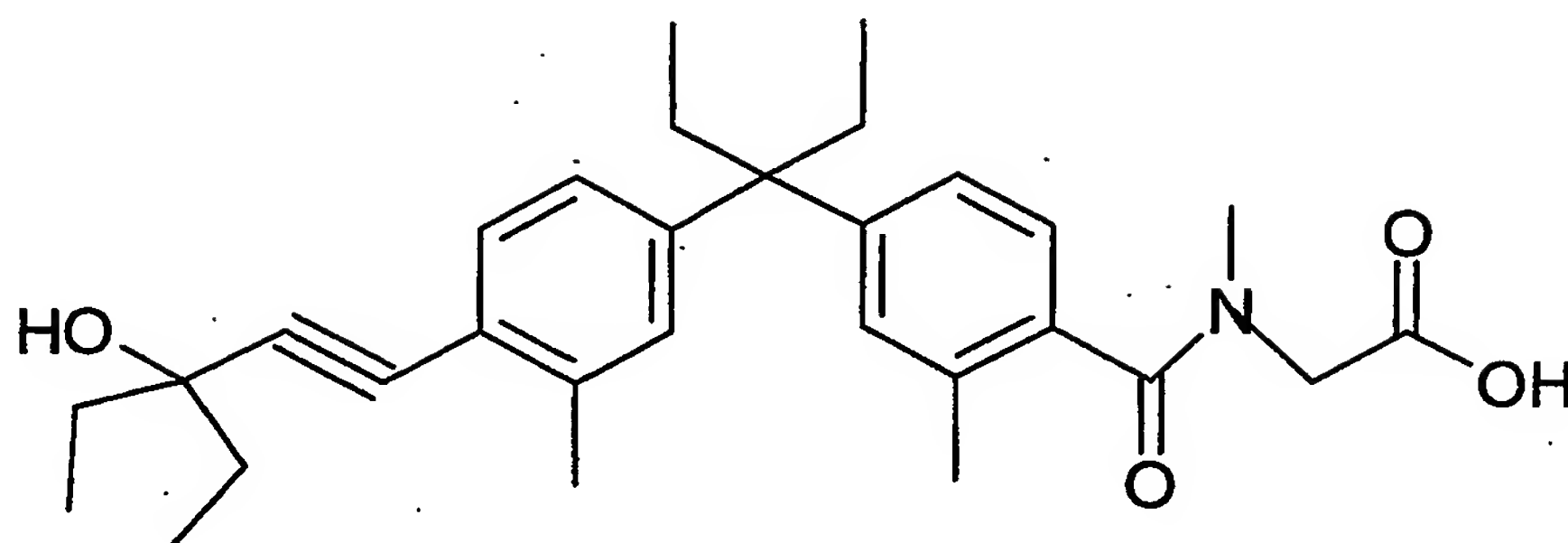


CC-18)

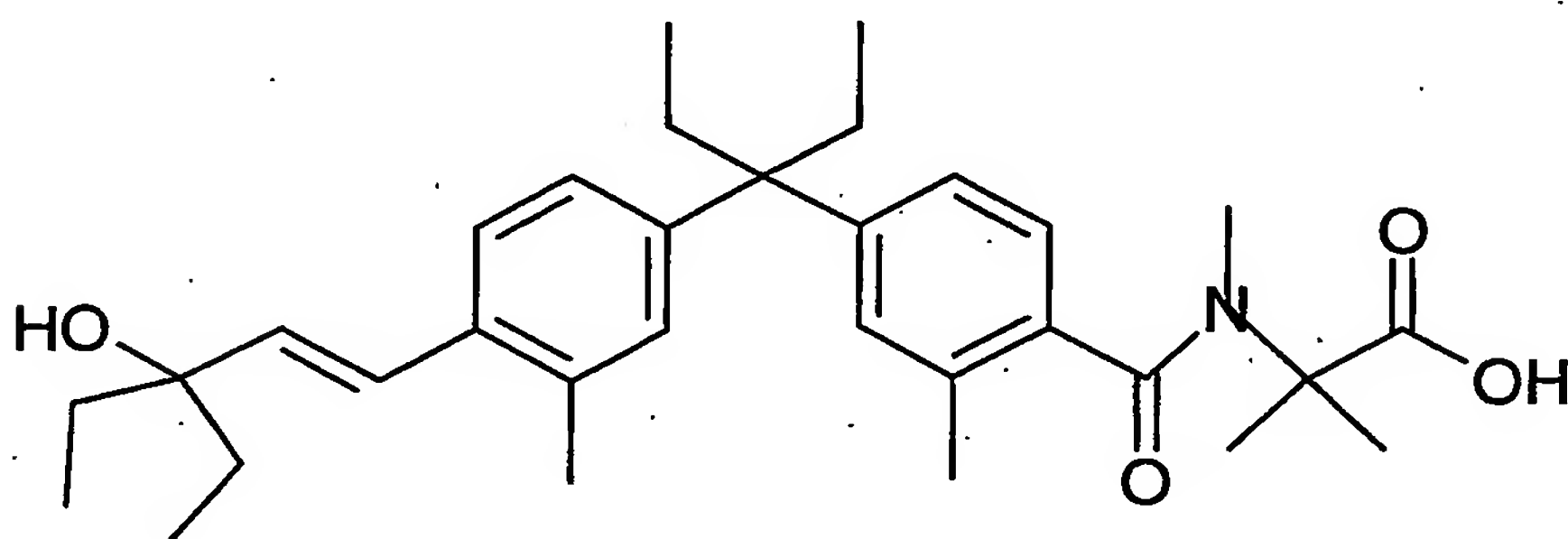


-153-

CC-19)

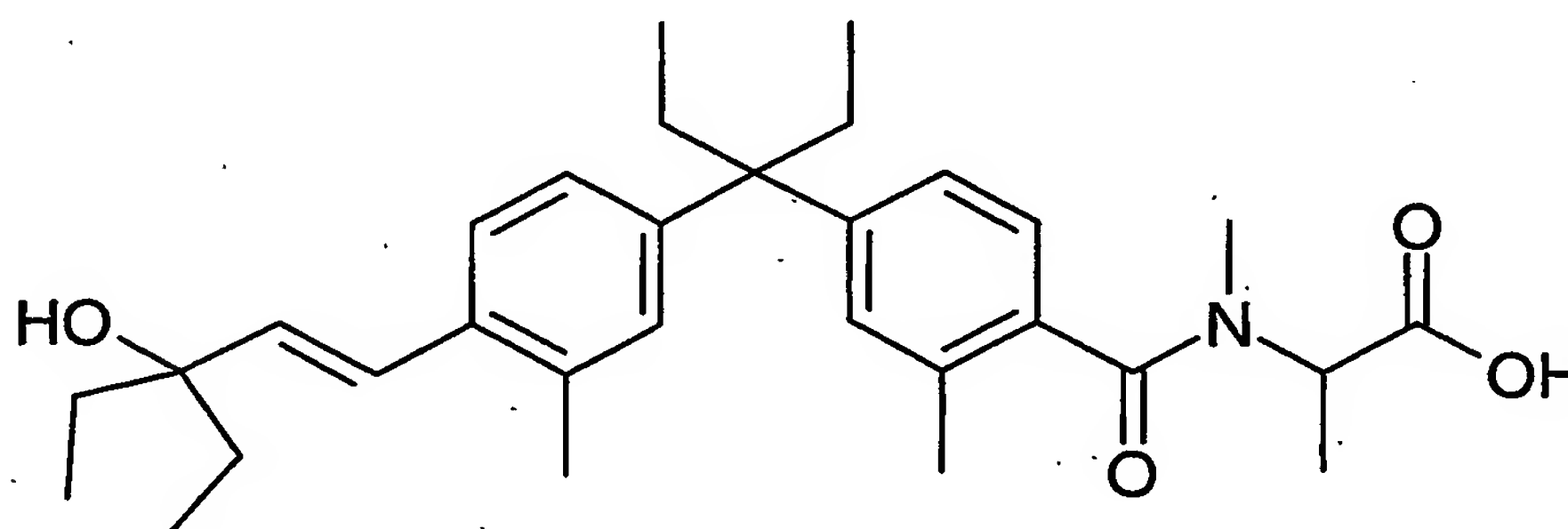


CC-20)

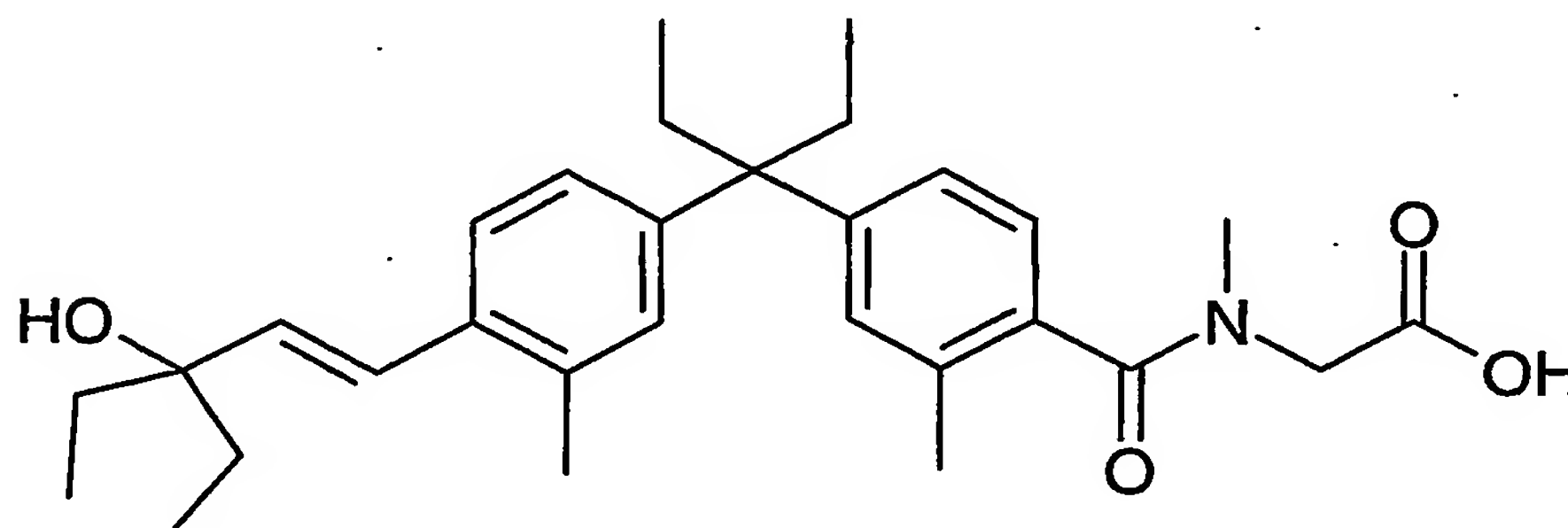


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CC-21)

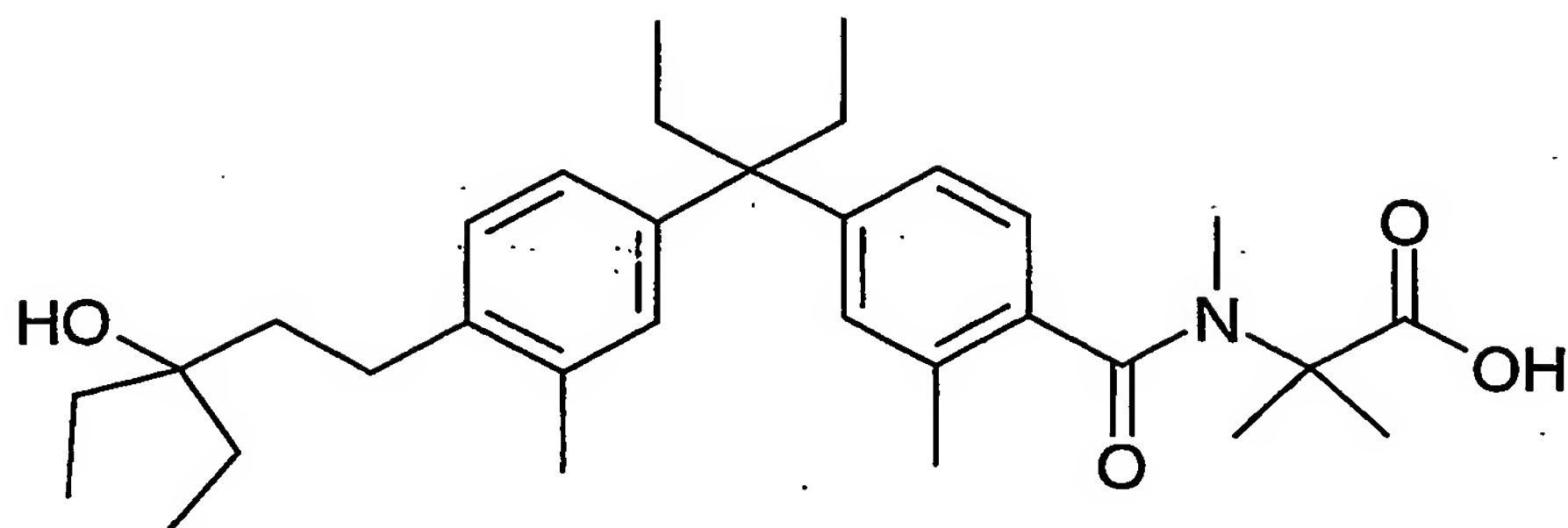


CC-22)

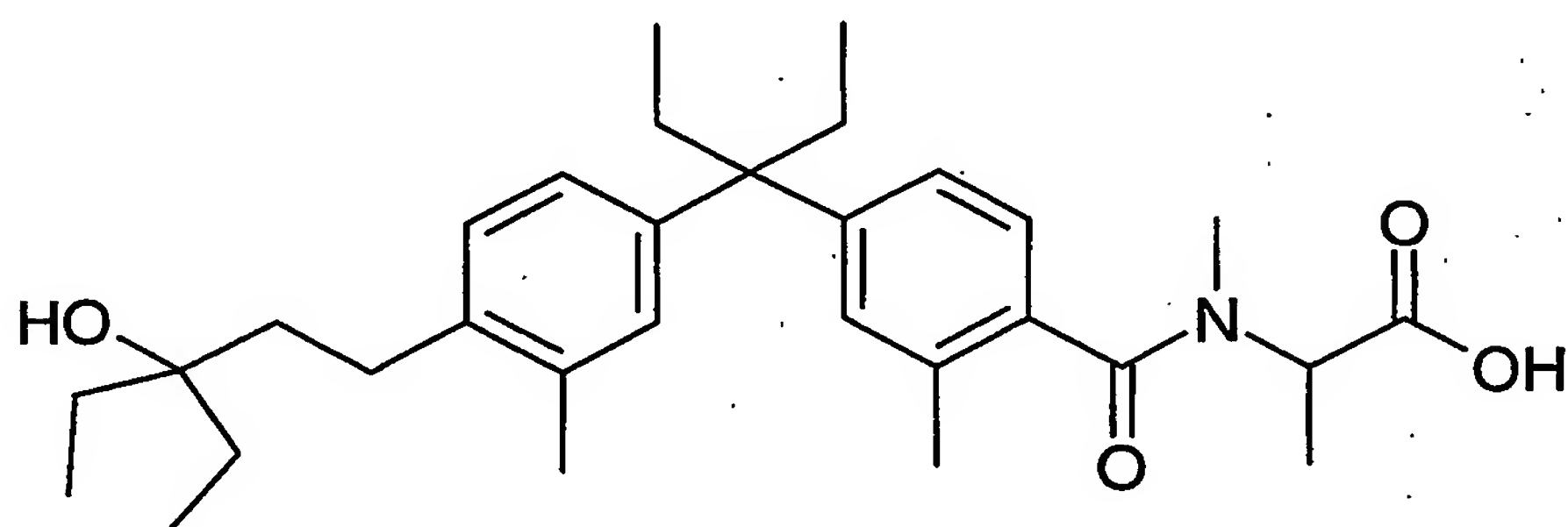


CC-23)

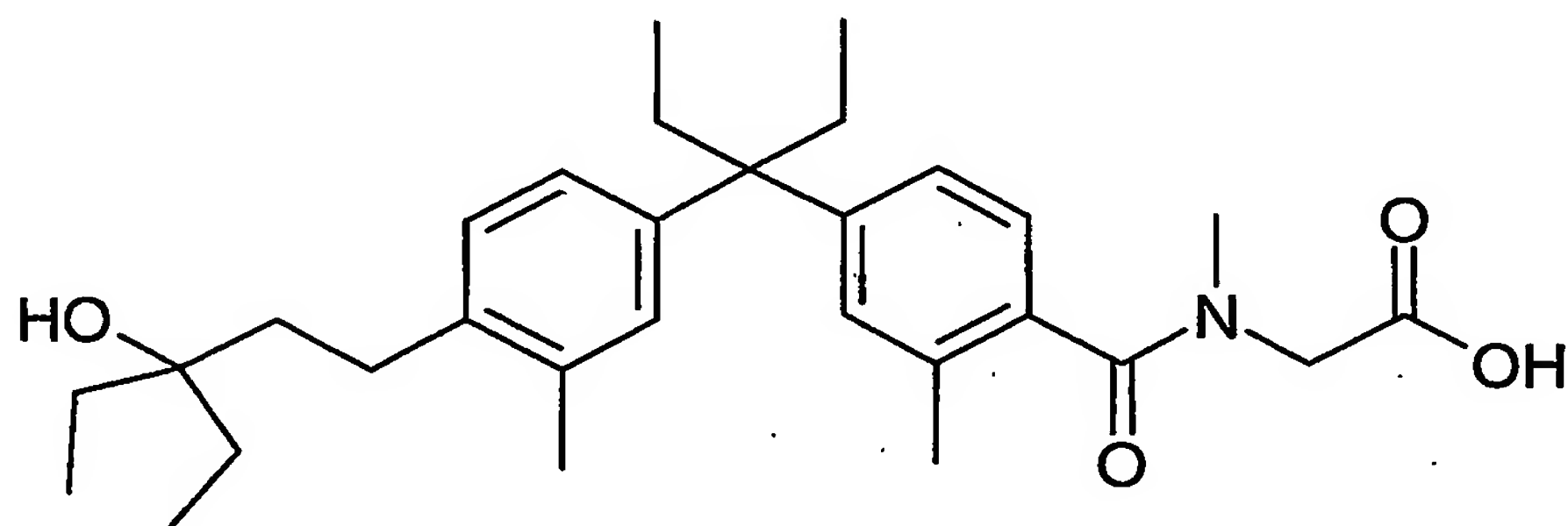
-154-



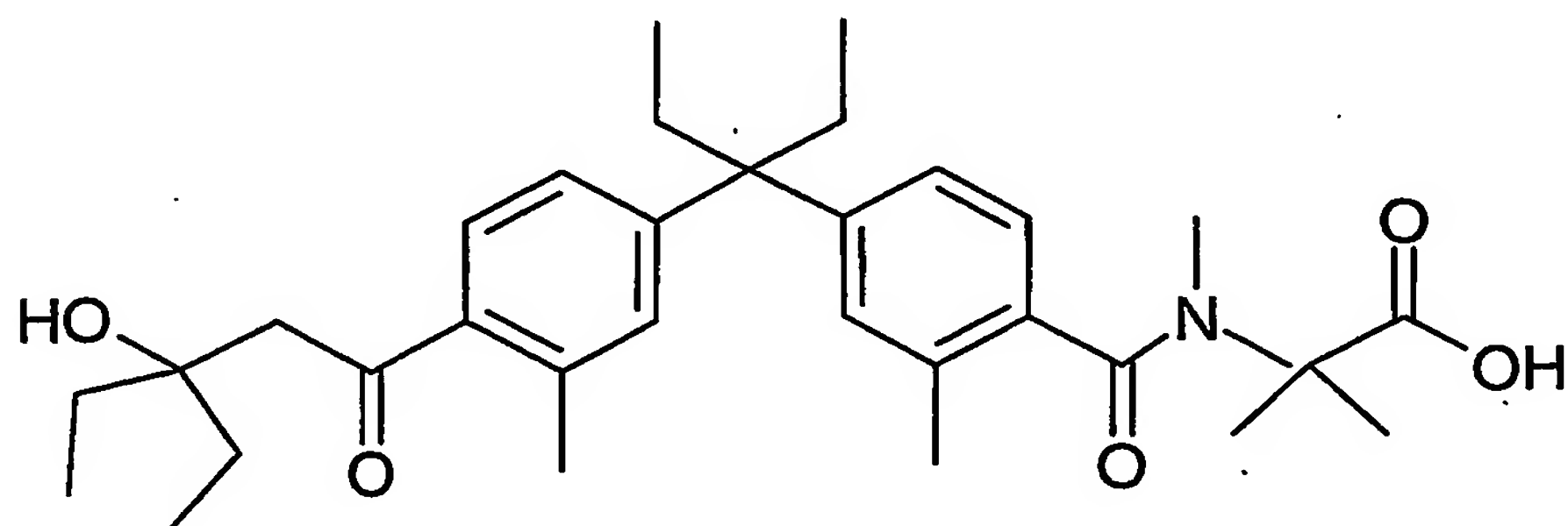
CC-24)



CC-25)

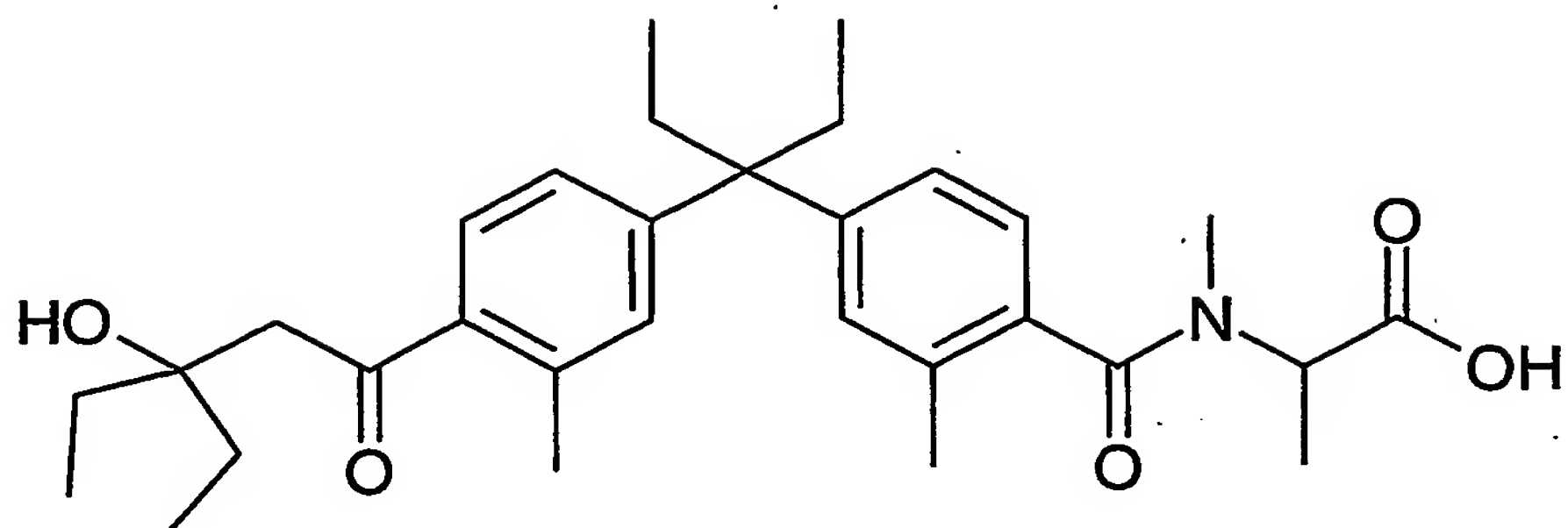


CC-26)

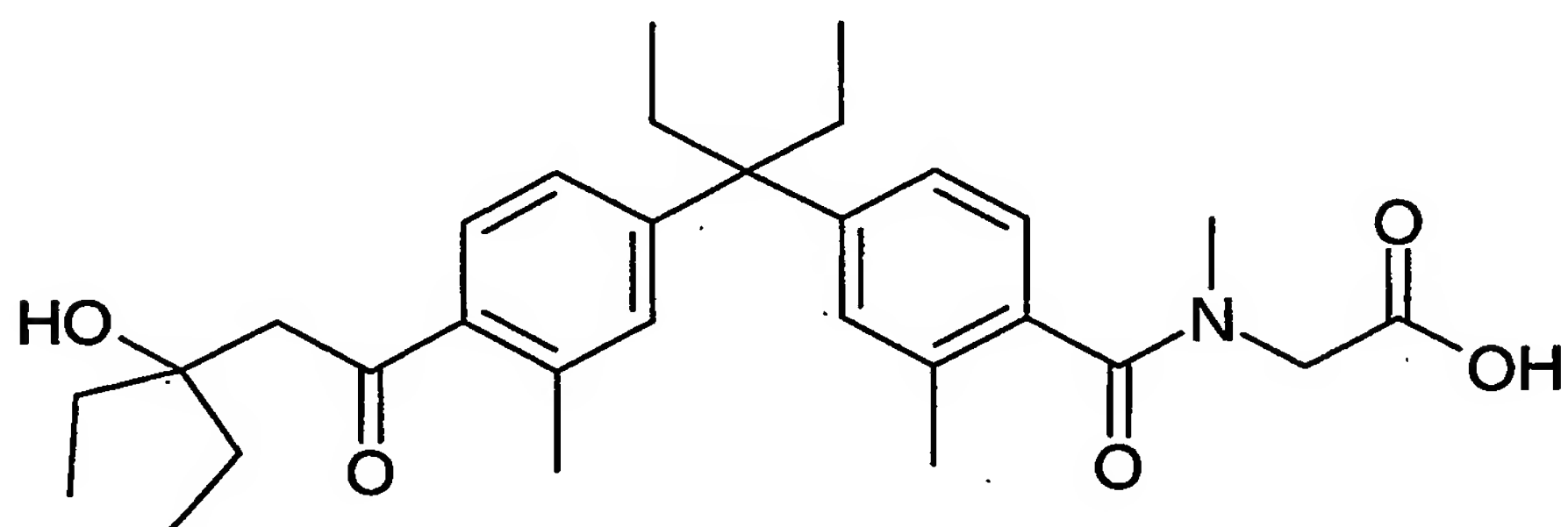


CC-27)

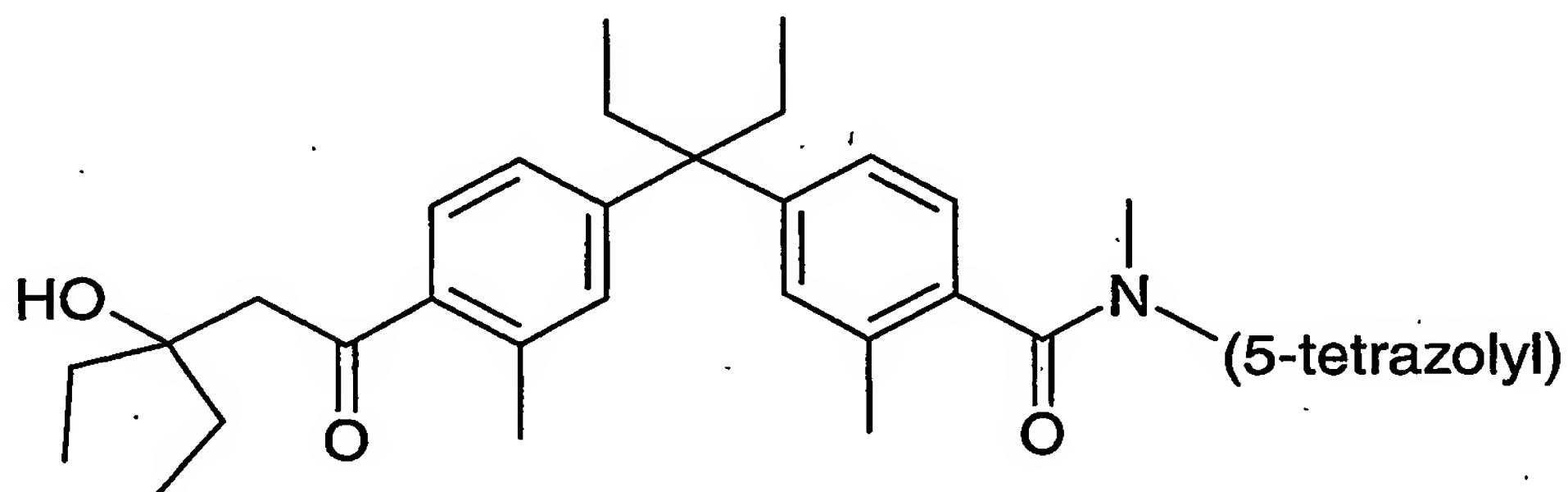
-155-



CC-28)

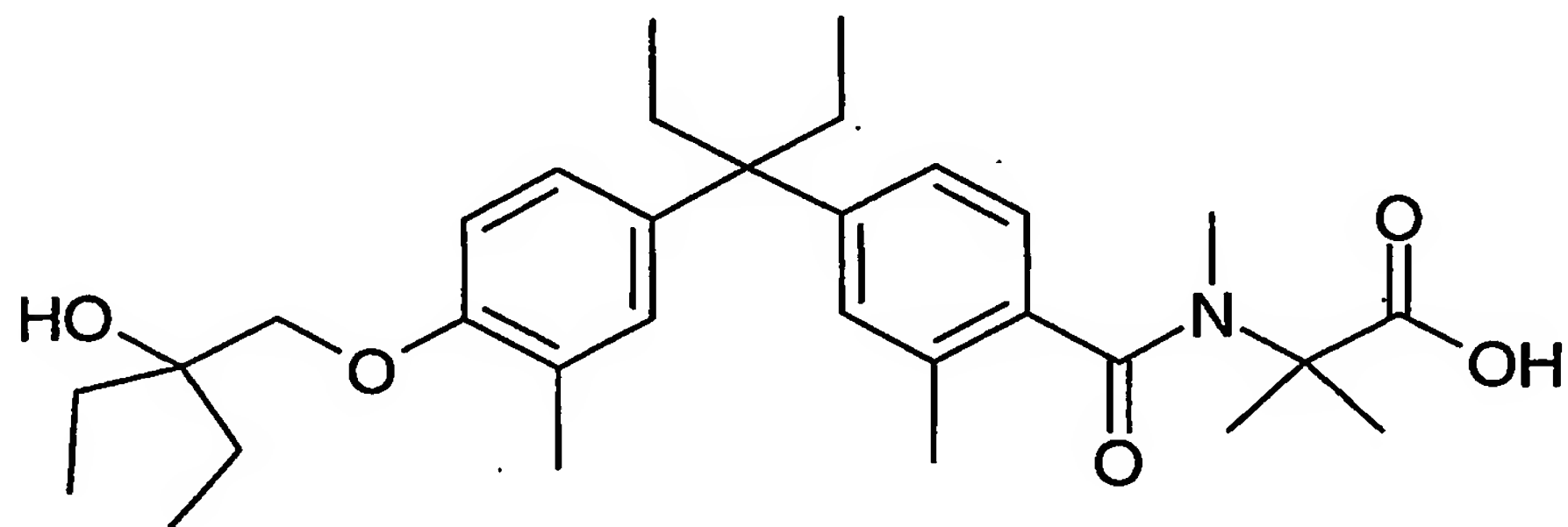


CC-29)



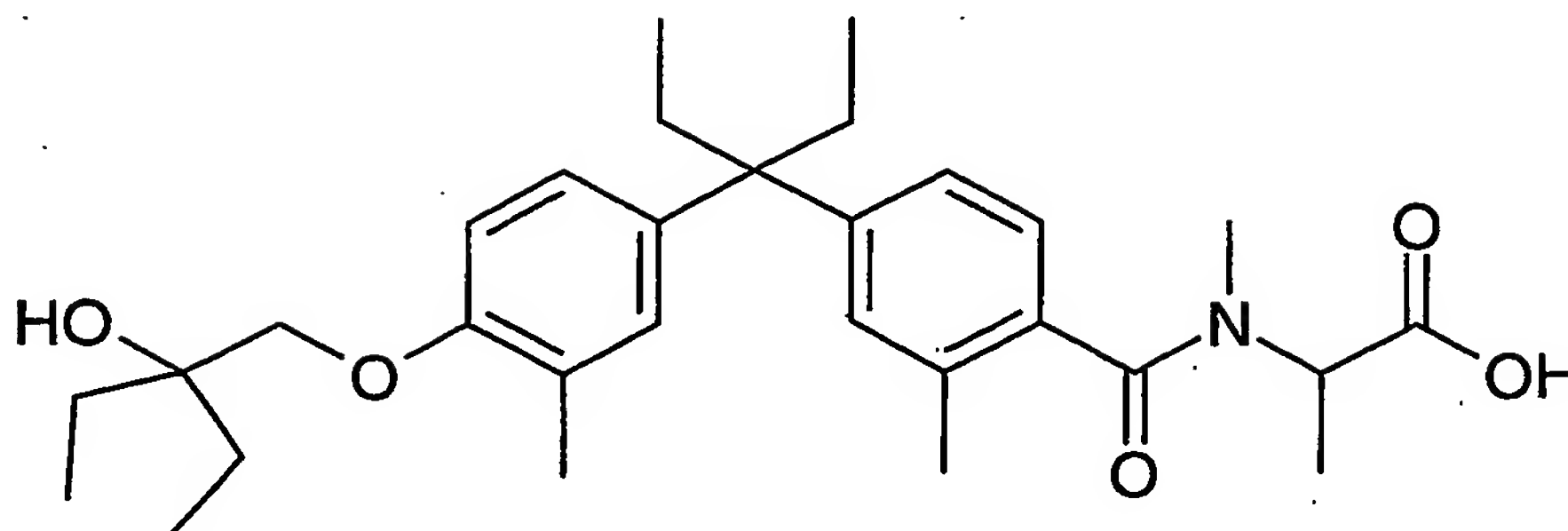
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CC-30)

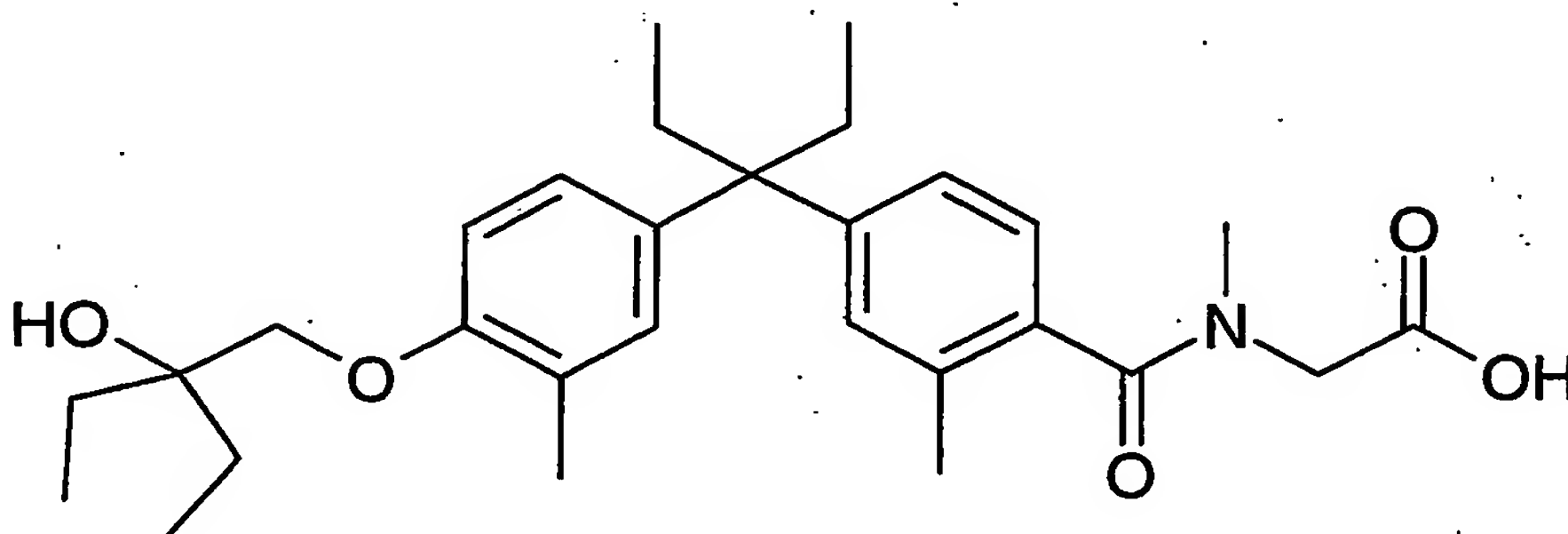


CC-31)

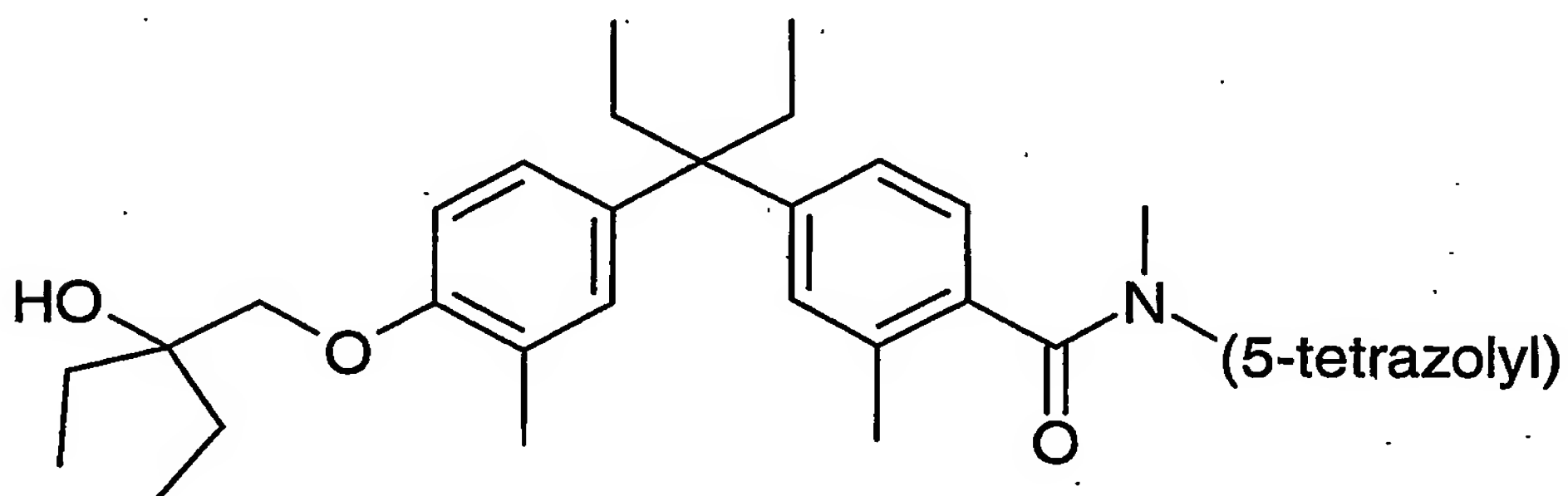
-156-



CC-32)

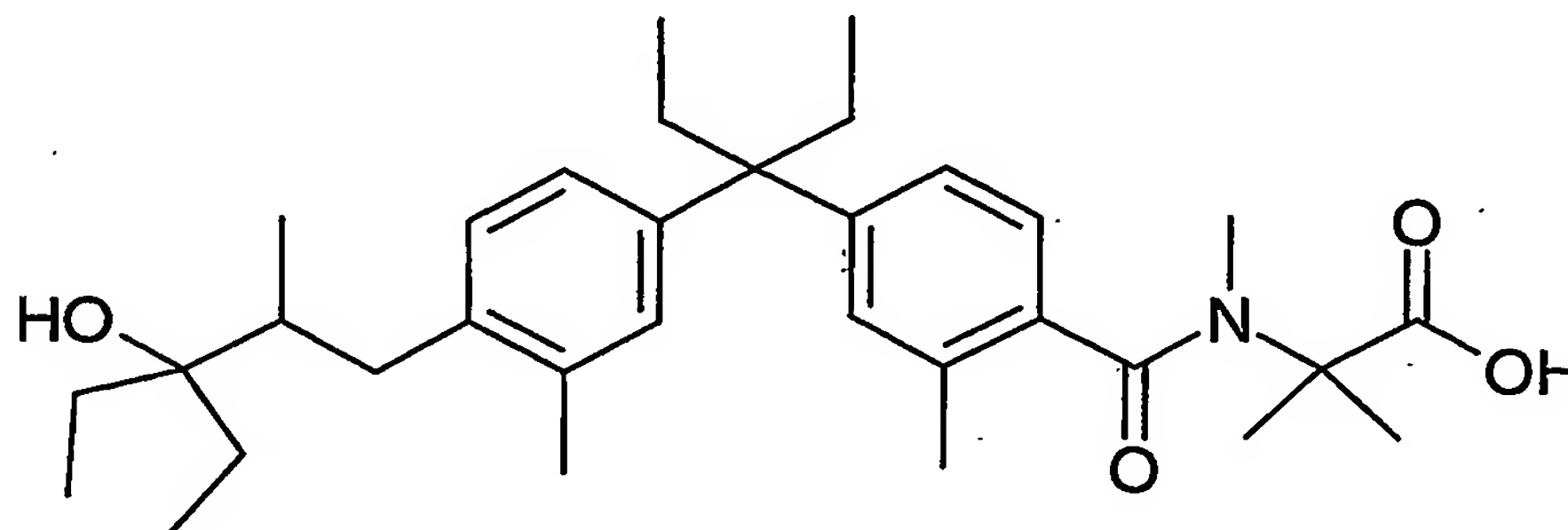


CC-33)



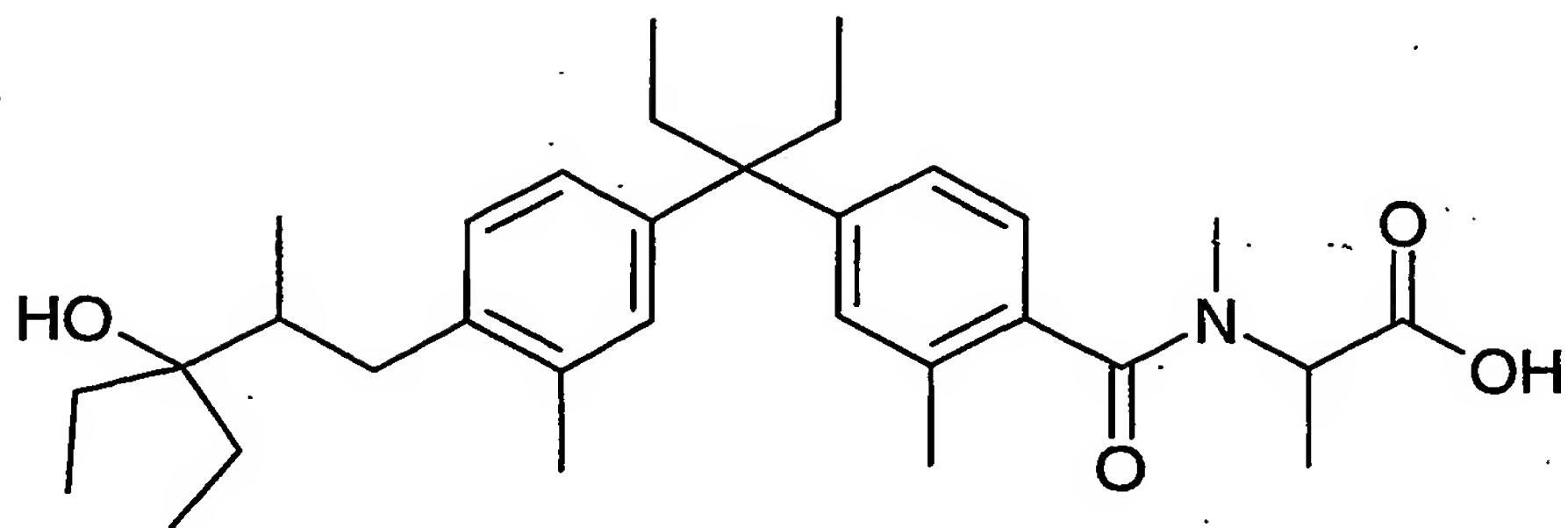
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CC-34)

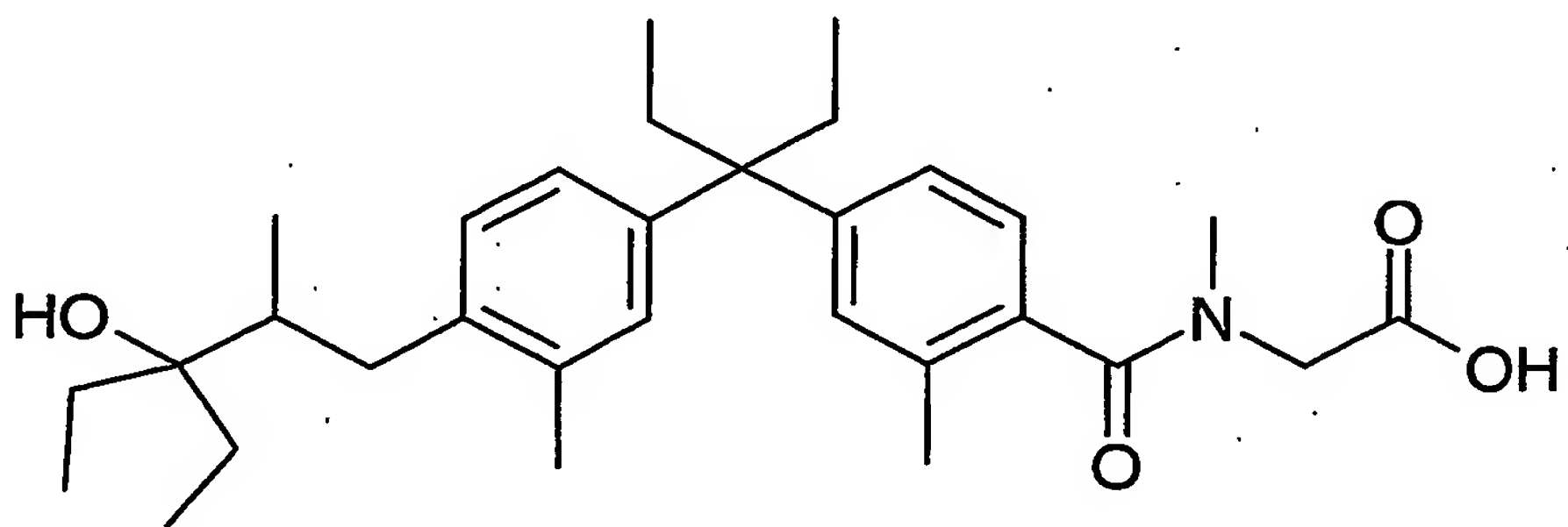


CC-35)

-157-

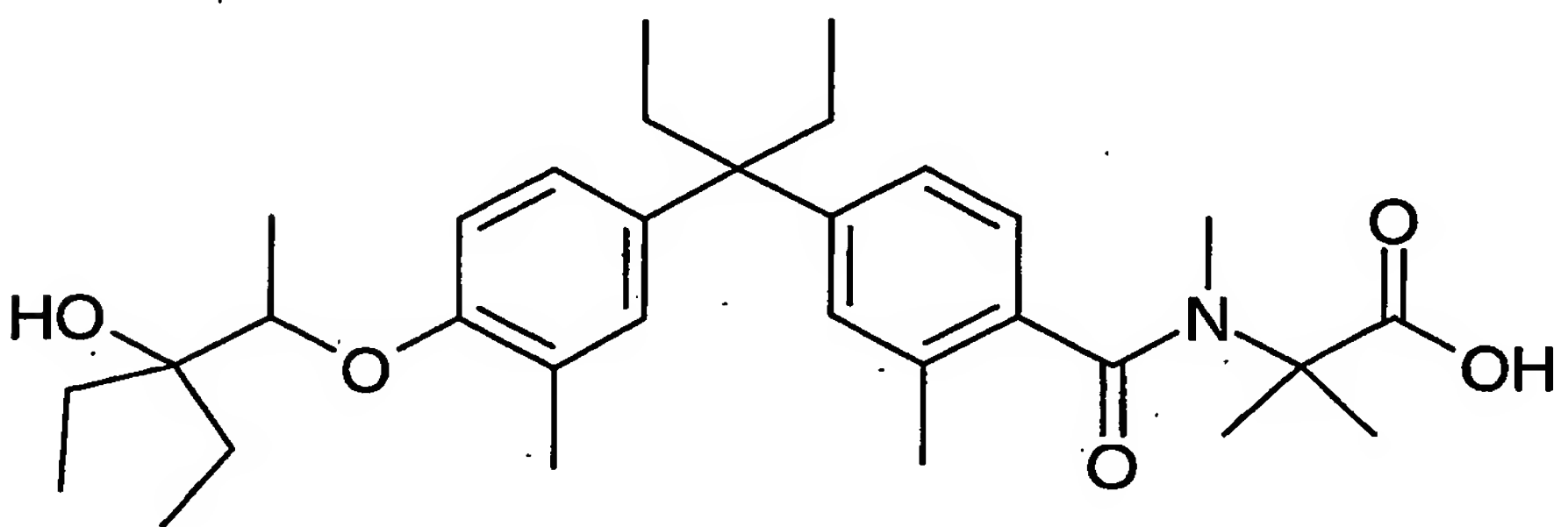


CC-36)

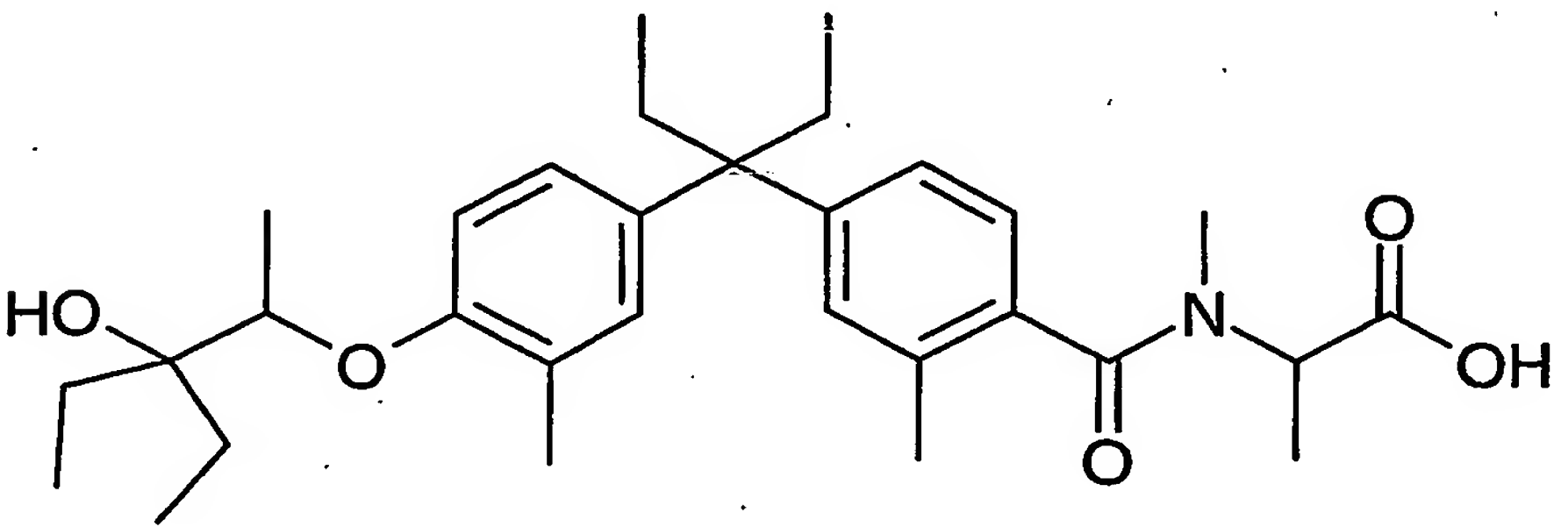


CC-37)

5.

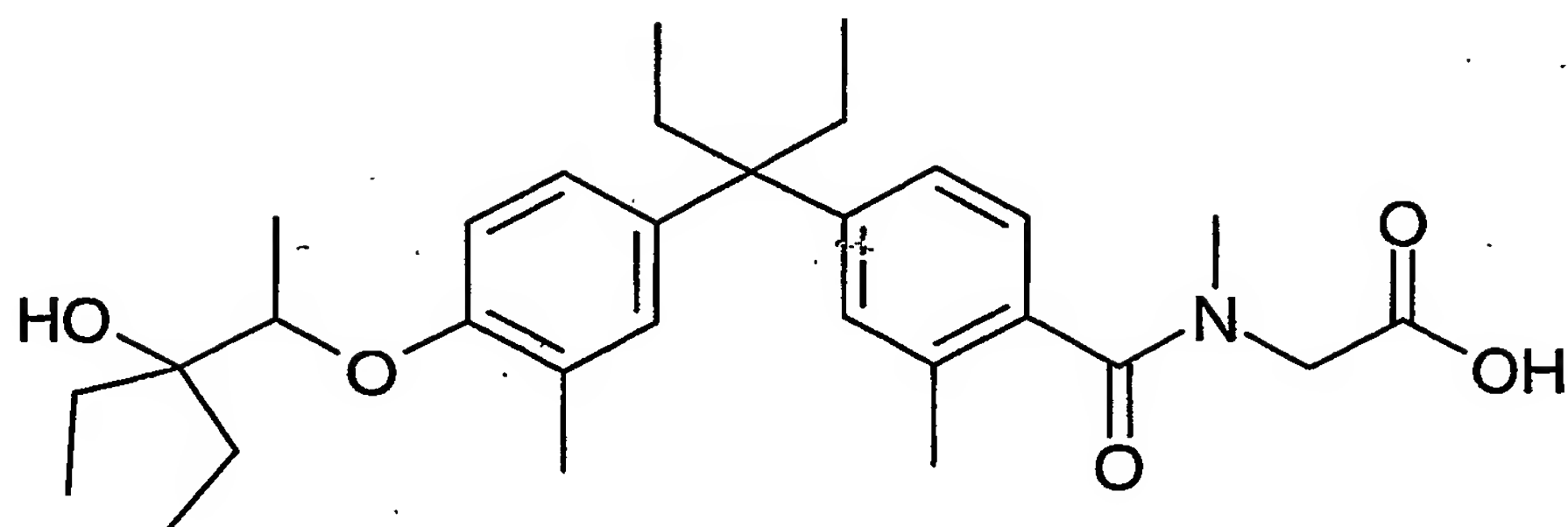


CC-38)

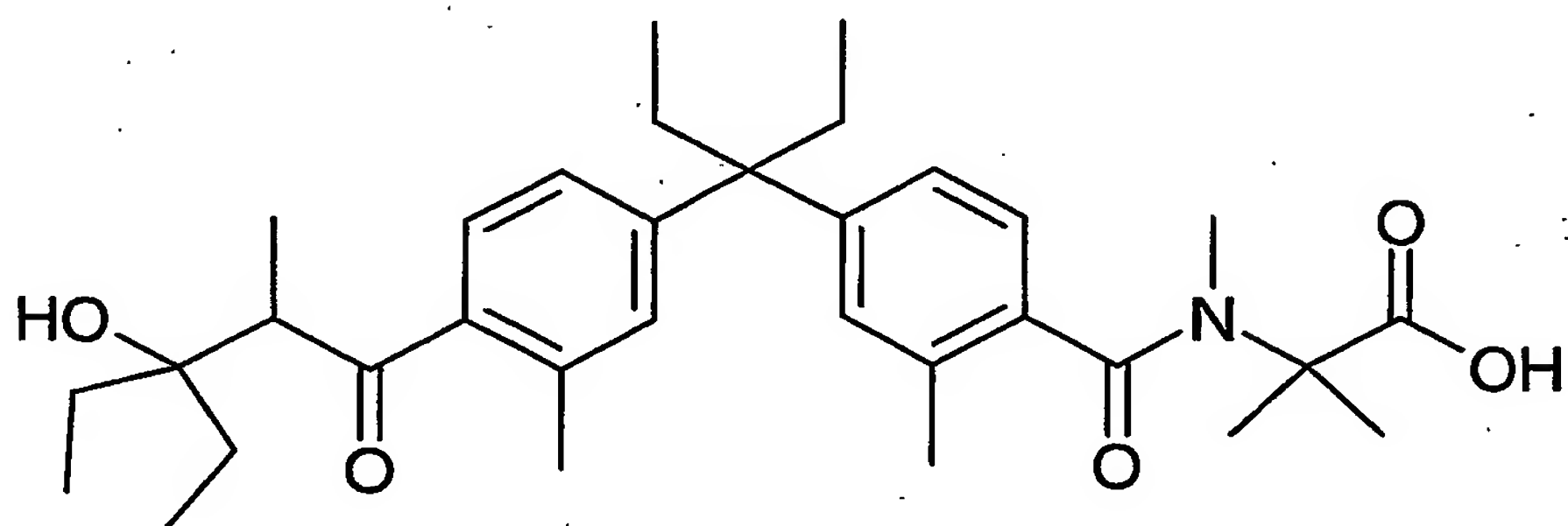


CC-39)

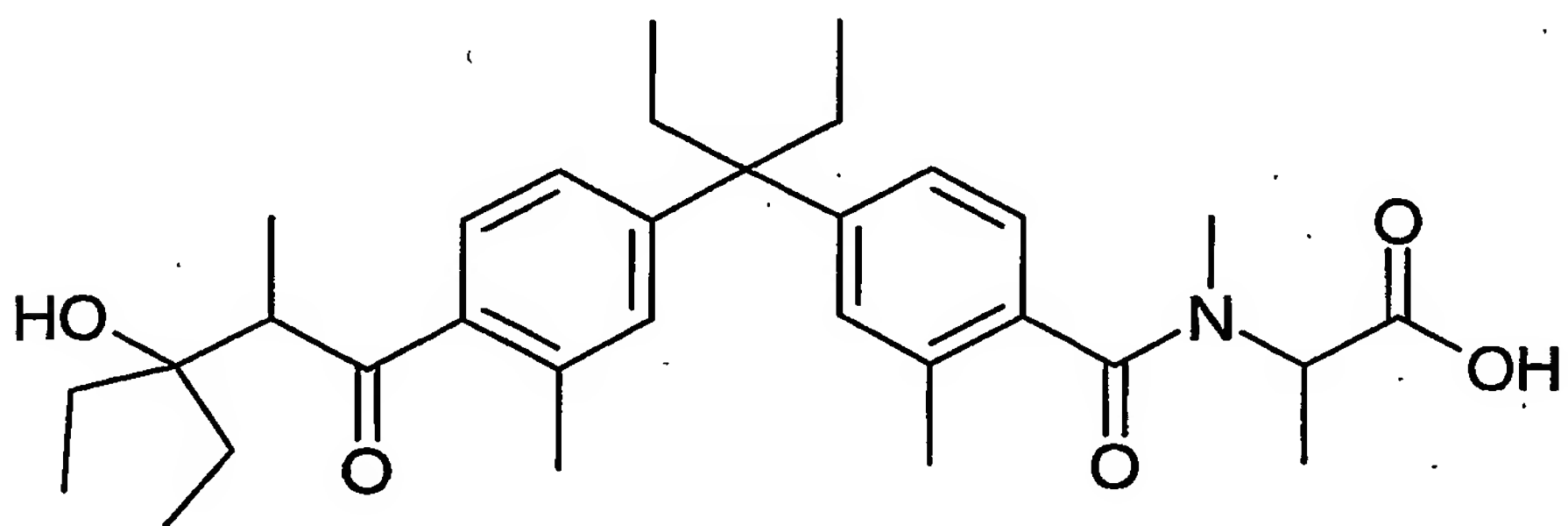
-158-



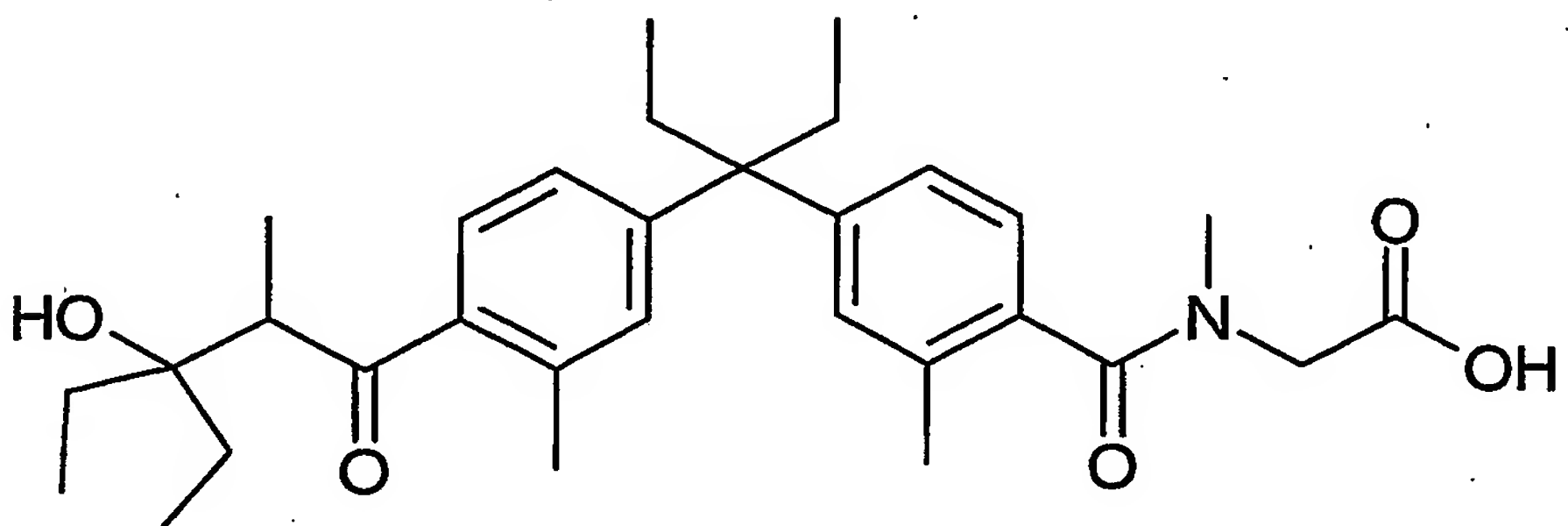
CC-40)



CC-41)

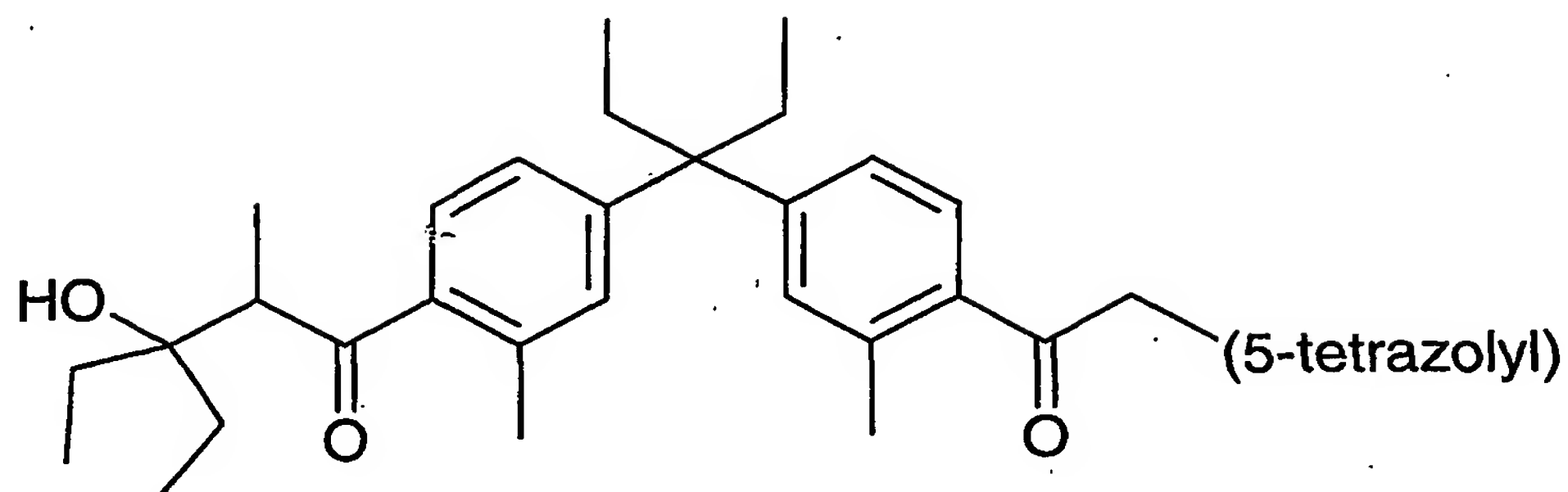


CC-42)



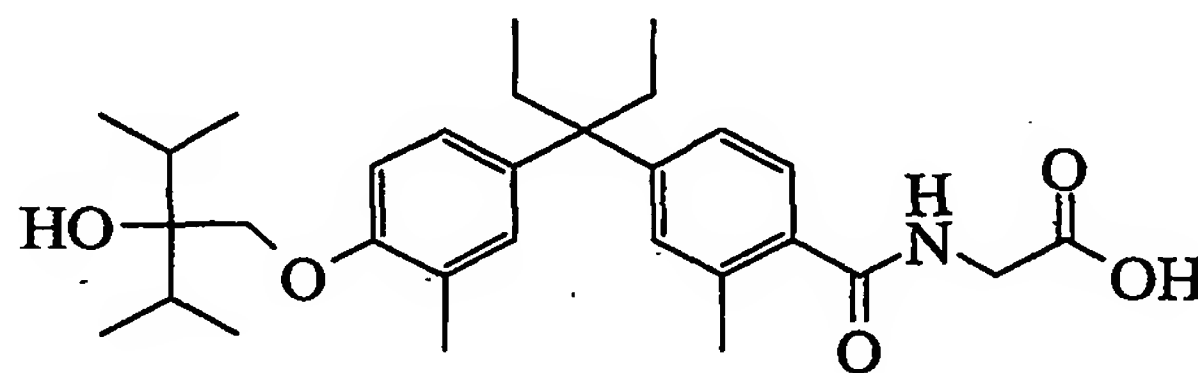
CC-43)

-159-



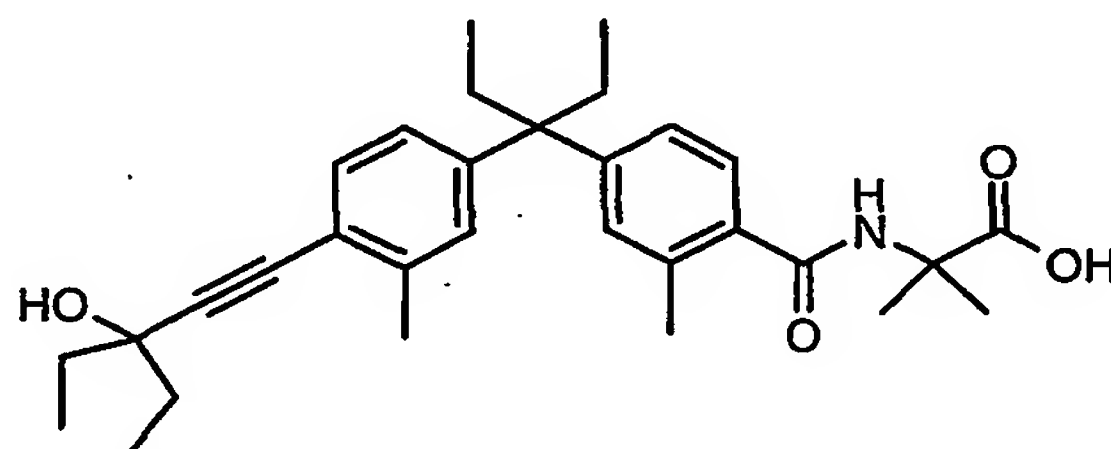
, or

CC-44)



5

8. The compound represented by the formula:

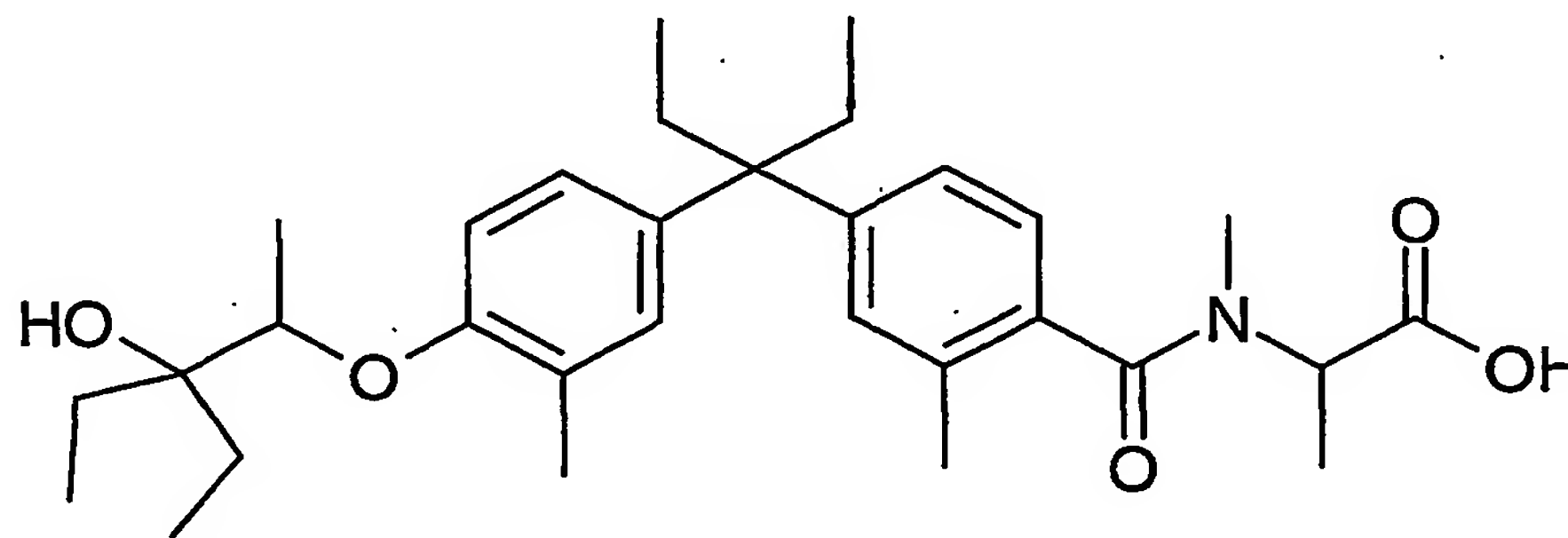


;

or a pharmaceutically acceptable salt or prodrug derivative thereof.

10

9. The compound represented by the formula:



;

or a pharmaceutically acceptable salt or prodrug derivative thereof.

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10. The prodrug derivative of the compound of claim 1 to 9 wherein the prodrug is a methyl ester; ethyl ester; N,N-diethylglycolamido ester; or morpholinylethyl ester.

11. The salt derivative of the compound of claim 1 to 9 wherein the salt is sodium
5 or potassium.

12. A pharmaceutical formulation comprising the compound of claim 1 to 9 together with a pharmaceutically acceptable carrier or diluent.

10 13. A formulation for treating osteoporosis comprising:
Ingredient (A1): the vitamin D receptor modulator of claim 1,
represented by formula (I);
Ingredient (B1):
one or more co-agents selected from the group consisting of:
15 a. estrogens,
b. androgens,
c. calcium supplements,
d. vitamin D metabolites,
e. thiazide diuretics,
20 f. calcitonin,
g. bisphosphonates,
h. SERMS, and
i. fluorides; and

Ingredient (C1): optionally, a carrier or diluent.

25

14. The formulation of claim 13 wherein the weight ratio of (A1) to (B1) is from 10:1 to 1:1000.

15. A formulation for treating osteoporosis comprising:

30 Ingredient (A2): the vitamin D receptor modulator of claim 1
represented by formula (I);

Ingredient (B2):

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one or more co-agents that are conventional for treatment
osteoporosis selected from the group consisting of:

- a. topical glucocorticoids ,
- b. salicylic acid,
- c. crude coal tar; and

Ingredient (C2): optionally, a carrier or diluent.

16. The formulation of claim 15 wherein the weight ratio of (A2) to (B2) is
from 1:10 to 1:100000.

17. A method of treating a mammal to prevent or alleviate the pathological
effects of Acne, Actinic keratosis, Alopecia , Alzheimer's disease, Bone maintenance in
zero gravity, Bone fracture healing, Breast cancer, Chemoprevention of Cancer, Crohn's
disease, Colon cancer, Type I diabetes, Host-graft rejection, Hypercalcemia , Type II
diabetes, Leukemia, Multiple sclerosis, Myelodysplastic syndrome, Insufficient sebum
secretion, Osteomalacia, Osteoporosis, Insufficient dermal firmness, Insufficient dermal
hydration, Psoriatic arthritis, Prostate cancer, Psoriasis, Renal osteodystrophy,
Rheumatoid arthritis, Scleroderma, Skin cancer, Systemic lupus erythematosus, Skin cell
protection from , Mustard vesicants, Ulcerative colitis, Vitiligo, or Wrinkles; wherein the
method comprises administering a pharmaceutically effective amount of at least one
compound of claim 1 or 9.

18. The method of claim 17 for the treatment of psoriasis.

19. The method of claim 17 for the treatment of osteoporosis.

20. A method of claim 17 for treating a mammal to prevent or alleviate skin cell
protection from Mustard vesicants.

21. A method of of treating a mammal to prevent or alleviate the pathological
effects of Benign prostatic hyperplasia or bladder cancer wherein the method comprises
administering a pharmaceutically effective amount of at least one compound of claim 1 or

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9.

22. A method of treating or preventing disease states mediated by the Vitamin D receptor, wherein a mammal in need thereof is administered a pharmaceutically effective amount of the compound of Claim 1 to 9.

23. A compound as claimed in any one of Claims 1 to 9 for use in treating a mammal to prevent or alleviate the pathological effects of Acne, Actinic keratosis, Alopecia, Alzheimer's disease, Bone maintenance in zero gravity, Bone fracture healing, Breast cancer, Chemoprevention of Cancer, Crohn's disease, Colon cancer, Type I diabetes, Host-graft rejection, Hypercalcemia, Type II diabetes, Leukemia, Multiple sclerosis, Myelodysplastic syndrome, Insufficient sebum secretion, Osteomalacia, Osteoporosis, Insufficient dermal firmness, Insufficient dermal hydration, Psoriatic arthritis, Prostate cancer, Psoriasis, Renal osteodystrophy, Rheumatoid arthritis, Scleroderma, Skin cancer, Systemic lupus erythematosus, Skin cell protection from, Mustard vesicants, Ulcerative colitis, Vitiligo, or Wrinkles.

24. A compound as claimed in any one of Claims 1 to 9 for use in treating or preventing disease states mediated by the Vitamin D receptor.

25. A compound as claimed in any one of Claims 1 to 9 for use in treating a mammal to prevent or alleviate the pathological effects of Benign prostatic hyperplasia or bladder cancer.

26. A compound as claimed in Claim 1 substantially as hereinbefore described with reference to any of the Examples.

27. A process for preparing a compound as claimed in claim 1 substantially as hereinbefore described with reference to any of the Examples.

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28. The use of a compound as claimed in claim 1 substantially as herein described with reference to any of the Assays and Tables for mediating the Vitamin D receptor.

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